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EDITED BY ANDREW WYNTER, M.D.

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Illustrations OF HOSPITAL PRACTICE:

METROPOLITAN AND PROVINCIAL.

ST. MARY'S HOSPITAL.

RECURRENT TUMOUR OF THE HAND: EXCISION OF A PART OF THE RADIUS AND OF THE THUMB: RECOVERY.

Under the care of W. COULSON, Esq.

AT pp. 238, 901, vol. 1858, may be found the account of a case, originally under the care of Mr. Prescott Hewett, at St. George's Hospital, in which a tumour had been formed, as it appeared, in a ganglion lying in connexion with one of the extensor tendons of the thumb. This tumour was repeatedly operated upon, and was removed, as there was every reason to believe, completely, on more than one occasion; and, as it showed a disposition to recur in the wounds of the operation, the remains were destroyed with powerful caustics, and thus the wounds were brought to heal. Notwithstanding this, however, no long period arose before it recurred in or near the cicatrix. On each occasion it was repeatedly examined microscopically, and no trace of malignant structure could be perceived in the growth, which exhibited, on the contrary, a well marked fibro-plastic tissue. On the last occasion on which he operated, Mr. Prescott Hewett removed all the tissues down to the bone, which was freely scraped, and the radial artery divided and tied. As the disease, however, recurred, and grew rapidly, and as the man was losing health and flesh, a consultation was held on his next admission into St. George's, to determine what further operative proceeding should be adopted. The choice seemed to lie between a total and partial amputation of the forearm; and it was thought, on the whole, better to recommend the former, as offering a more secure prospect of immunity from recurrence of the disease. The man, however, was unwilling to lose his hand, and so left the hospital. He soon afterwards put himself under Mr. Coulson's care, and was admitted into St. Mary's. There the same question was entertained, and the same opinion was held by the majority of the surgeons; but, as the patient was decided in his refusal to submit to amputation, Mr. Coulson determined to remove the tumour with the end of the radius, including the thumb.

This was accordingly done last January. The tumour, on subsequent examination, was found to present the same structure as on the previous occasions. It passed down to the periosteum of the radius, but did not seem to grow from it, or from the bone, which was sound. The parts in the neighbourhood were in no way affected.

The man made a good recovery: the soft parts healed over the end of the radius; and the hand preserved some, though slight, motion at the wrist. The fingers could be flexed and extended to a limited degree, and he could hold a pen or other object between them. When last seen, about three months after the operation, the usefulness of the hand was increasing. It is now nearly a year since the operation, and nothing more has been heard of the case either by Mr. Coulson or Mr. Prescott Hewett; so there can be little doubt that he remains without return of the disease, as he would in the other case have been sure to have presented himself either at St. George's or St. Mary's. He was attending for a short time at the former hospital, three or four months after the operation, for cough. A surmise crossed the minds of some of those who saw him that this might possibly depend on the deposition of some morbid growth in the lungs; but nothing was observed during the progress of his case to favour this idea, and the cough seemed merely accidental. The cicatrix at that time was certainly quite sound; but the man was in a bad state of health, and organic disease of his lungs was feared.

REMARKS. This was one of a class of cases which have been frequently noticed of late, though perhaps they may not have attracted quite so much attention as they deserve, and which lie halfway, as it were, between malignant and innocent diseases, partaking of the nature of the former from their inveterate tendency to recur after removal, but belonging, in truth, to the latter class, since they have no effect on the constitution, and do not contaminate the blood or the lymphatic system. Such of these tumours as have fallen under our notice have been of the fibroid or fibro-plastic variety. A very interesting account of them will be found in Paget's *Lectures on Surgical Pathology*, 1853, vol. ii, p. 158, where histories are given of patients who, notwithstanding the recurrence of tumours of this nature many times, continue to enjoy good health. A similar case is, we are informed, at present under Mr. Coulson's care. Some of these tumours run a less favourable course; and the patient, exhausted by repeated operations, or by the sloughing of the tumour, sinks and dies from asthenia. Two such cases have fallen under our notice. The patients were women, and the tumour had commenced as a common cystic tumour near the breast. This having been excised, recurred, assuming more and more the characters of fibro-plastic disease, mixed at first with cysts, and afterwards entirely solid, as the case progressed. In one case five, and in the other ten operations were performed. Both patients seemed to have a great reluctance to submit to treatment, and continued, in spite of experience, to cling to the hope that the tumour would go away of itself; not presenting themselves, therefore, for operation, until the new growth had attained considerable size. Thus it happened that a time came at length when the tumour had been allowed to grow to an immense size in the axilla, and its connexion with the great vessels and nerves there rendered it inaccessible to operation. It was, therefore, necessary to leave it to fungate and slough; and the patients died a lingering death, without any symptom of specific mischief. In these cases, as in Mr. Prescott Hewett's above reported, there was every reasonable ground for saying that the tumour had been completely removed more than once, as the incisions had been kept well away from the tumour, and the surface of the wound carefully examined afterwards, in order to be sure that no portion had been left behind. Still there is not the same mathematical certainty that the whole growth has been removed as there is where the limb has been amputated; yet, even after amputation, these tumours have been known to recur. A striking instance has been recorded by Mr. Birkett, in the *Guy's Hospital Reports* for 1858. In that case, a fibro-plastic tumour was removed three times from the leg; then, at the fourth recurrence, the thigh was amputated. Notwithstanding this radical measure, the tumour recurred in the stump a month after the operation, and the patient died of sloughing and hæmorrhage. No trace of a similar growth was found after death in any other part of the body.

We have thought it better to give the history of the above patient as far as it is known to us, being anxious not to appear to report a favourable conclusion to a case when the facts do not bear us out in so doing, and despairing, after this lapse of time, of learning anything more positive about the patient. It is certainly possible that the disease in his lungs may have made progress, and he may thus have been prevented from communicating with his surgeon. From what we have seen and read of such cases, it seems unlikely that the operation should have produced a permanent cure. Such recurrent tumours, when they have once entered upon their fatal course, though they may be retarded, are not often permanently arrested by operation; and there was nothing in the general condition of this patient which promised more favourably for his case than for the average of similar diseases.

ST. GEORGE'S HOSPITAL.

TWO CASES OF TEALE'S AMPUTATION.

Under the care of Prescott G. Hewett, Esq., and G. D. Pollock, Esq.

The method of amputation proposed by Mr. Teale has not yet been sufficiently tried in London to enable metropolitan surgeons to make up their minds as to its merits relatively to other modes. Perhaps, the largest number have been performed at St. George's Hospital; but, whether from accidental or other causes, they have not shown a very encouraging amount of success (*vide* p. 966). We proceed, however, to give short notes of two cases in which some such method was clearly indicated, and in one of which at least its success was very gratifying.

Case I. John C., aged 62, was admitted under the care of Mr. Cæsar Hawkins, on August 31st, and transferred to the care of Mr. Prescott Hewett. He had burnt his left arm and shoulder fifty years previously, very severely. It appeared that the burnt surface healed entirely; but whether from mismanagement or otherwise, the arm was allowed to unite so closely to the side that it was bound down to the thoracic parietes by a firm cicatrix, reaching down nearly as low as the elbow. The cicatrix on the lower part of the arm and forearm had broken out again twice after some accidents, and had been open and rather spreading for the past year, giving rise to intolerable pain and much distress from the fœtid nature of the discharge.

After he had been under treatment with no benefit for three weeks, Mr. Prescott Hewett determined to yield to his urgent request and remove the arm. It was rather difficult, however, to perform the operation. The adhesion between the arm and chest prevented the application of a tourniquet, and the extent of the cicatrix on the inner side of the arm forbade the formation of much of the stump from that part. Mr. Hewett accordingly decided on performing Teale's amputation, forming the long flap from the outer part of the arm, while the short flap containing the vessels would come from the inside of the arm after division of the cicatrix. This was done accordingly; compression was established on the subclavian, but could not be maintained effectually, on account of the rigid state of the parts about the shoulder. The brachial artery was therefore tied immediately on its division, before sawing the bone. The outer flap, being brought over, was found to fit perfectly. The wound healed kindly, and the man left nearly well in the early part of October.

Case II. In this case the method of Mr. Teale was adopted on account of the pain which the man had experienced on two former occasions after amputation, from the pressure of the stump of the bone on that of some large nerve. The patient, George P., aged 20, was admitted originally under Mr. Pollock's care, on July 30th, 1858. He had had the foot removed by Syme's amputation two years previously at the Bristol Infirmary for injury. The stump healed kindly, and he was able to walk about well for half a year, when it became very painful, and he noticed that it was always cold. The pain had increased to such an extent that he begged it might be removed. This was done by the ordinary flap operation on September 9th. The nerves were traced, and the posterior was found enlarged in the way usual with nerves in stumps, and firmly adherent to the end of the tibia—as was also the anterior. The stump did not heal during his stay in the hospital; but he was discharged on December 22nd, able to wear a wooden leg which did not press on the stump, and capable of work. The stump, however, never healed, and in a few months became so painful, that on September 28th of this year he was again admitted, in order to have amputation performed higher up, and by a method which would secure the nerves from pressure.

Accordingly, on October 6th, the leg was removed below the tubercle of the tibia by rectangular flaps. The dissection showed the nerves, especially the posterior tibial, very large, and the posterior nerve as before terminating in a swelling tucked in below the stump of the tibia.

The stump was unfortunately attacked at night with rather severe secondary hæmorrhage, necessitating the laying open of the wound, the ligature of some small vessels, and the readjustment of the flaps.

The wound after this sloughed extensively, and up to the present time has not healed. He also complains of some pain in it; referred, however, now, not to the extremity of the stump, but to the inner side of the leg. There is no apparent disturbance of the general health. The surface looks languid and dark, but not otherwise unhealthy.

CENTRAL LONDON OPHTHALMIC HOSPITAL.

CLINICAL OBSERVATIONS.

In the practice of Haynes Walton, Esq.

IV. USE OF THE OPHTHALMOSCOPE IN DISEASES OF THE EYE, AND IN THE DIAGNOSIS OF CATARACT.

In our number for August 13th, we alluded to the condition of the interior of the eye as seen by the ophthalmoscope, in cases of impaired vision after blows. We gave Mr. Walton's observations respecting these; viz., that in all the examples of defective sight from blows on the eyeball, or about the orbit, that had of late come under his notice, some manifest cause in the form of internal lesion, for the most part mechanical, was detected. This statement differed from the general received opinion, which referred the derangement of the sense to functional change only, or in some mysterious way through injury to the branches of the fifth pair of nerves. Additional cases go further to illustrate this point. In those formerly referred to, there was direct physical injury; in these, the interruption to sight was due entirely to inflammatory action excited by the injury.

Case I. A lad, aged 17, applied to the Hospital, because he saw imperfectly with his right eye. He could only count his fingers. He had visited several ophthalmic institutions, and had been submitted to divers kinds of treatment. Sixteen months before, he had been struck on the eye with a dead pigeon. Mr. Walton examined the patient, to determine whether there was any external sign of internal lesion, and whether also he could, by a concentrated light, get any indication of deep-seated alteration. Not the slightest change could be observed. Atropine was then used; and, on examination by the ophthalmoscope, minute black specks on the surface of the capsule of the lens shewed that during the inflammation which followed the injury, the posterior part of the iris, the urea, in consequence of the swelling of the iris, and the other changes in the eyeball, had been in contact with the capsule, and some of the pigment had been left. But a greater change was yet to be observed. In the turbid vitreous humour hung shreds, or threads, which, from their arrangement, appeared to be of an inflammatory origin. The optic disc could not be seen. The choroid coat had undergone much pathological change. No doubt there had been here what Dr. Jacob would call "eyeballitis". Redness and pain of the eyeball quickly followed the blow, which was a light one; and all useful vision was soon lost. A very slight blow on the eye may produce, as is well known, a much worse result. (There is now attending at the Hospital, a boy, who has lost his eye from acute inflammation terminating in suppuration, caused by a very trivial blow from the peak of his cap.) In all probability, the external evidence of inflammatory action was slight, and except so far as the loss of sight was a symptom—of course, a great one—there was nothing to arouse suspicion of the great mischief going on in the eyeball. It was the ophthalmoscope only, therefore, that revealed the true state of the case.

Case II. A boy, aged 10, was struck on the eye with a stick, and brought to the Hospital a week afterwards, having in the meantime been bled and blistered, because of the pain that ensued. The eyelids were swollen from the enormous blister on the temple, causing much effusion around. The surface of the eyeball was natural. The pupil dilated quickly and fully under atropine,—no slight evidence of the absence of inflammatory action in it. The lens was clear, but the vitreous humour was turbid, and the choroid coat was spotted like a leopard, in consequence of the removal of the choroidal pigment in patches. The state of the retina could not be made out satisfactorily, because of the loss of the transparency of the vitreous humour. There was scarcely any vision, and as all evidence goes to show that the eye was perfect before the accident, the conclusion is that the changes which were seen, were the result of the injuries, and were all effected in a very short space of time, and that, without the least outward mark or sign of what was going on within. The little patient came no more to the Hospital. In all probability, his mother would not bring him, because she learned the true state of things, and the great likelihood of the eye not recovering its integrity.

Prior to the discovery and perfection of the ophthalmoscope, surgeons were puzzled as to the existence, or non-existence of incipient cataract. The rule used to be to give a guarded diagnosis when there was doubt, and to wait for results. The catoptric test is of no use except in in general opacity of the

lens, and is not applicable in the earliest stages of that. Happily we can now tell with as much certainty, when the lens is no longer transparent, in whole or in part, as we can, whether the cornea is, or is not invaded by opacity. More than this, Mr. Walton states that cataract may be discovered before a person is even aware, from defective sight, that it exists.

Almost always, cataract begins by invading some of the bundles of the lens-fibres, and, therefore, commences partially. The circumference of the lens is usually first attacked, and the opaque bundles are disposed in radii. So long as they are superficial, they may be detected very early with a well dilated pupil. When they are deep, and when the posterior part of the centre of the lens is slightly opaque, nothing but the ophthalmoscope may be able to detect the morbid change. But with this instrument well used, no dot of opacity, ever so small, can escape scrutiny. Certainly it is less easy to diagnose early general opacity, and one must be familiar with the ophthalmoscope to do it satisfactorily, but it can be done. Several times Mr. Walton has found the lens partly opaque, without the defect being known; and this is not to be wondered at, when we are aware that a person may be quite blind in one eye, and be ignorant of it. But it is a new fact in ophthalmology, that the ophthalmoscope can detect lenticular disease after a person has in vain endeavoured to discover any defective state of sight, and this has occurred twice to Mr. Walton. As the cases were very like, the narration of one of them will suffice.

Case III. A female, aged 48, applied with cataract in the right eye, at once apparent, from its advanced state. She inquired anxiously about the probable fate of the other; and when she said in answer to questions that the left was not impaired, Mr. Walton told her that in all probability it was not affected, but requested an examination with the ophthalmoscope before he could venture to speak positively. The examination was made without dilating the pupil. He quickly perceived on the surface of the centre of the lens, two minute streaks of opacity. Before telling what he discovered, he tested the state of vision in reading, etc., and he could not perceive any defective sight; in the other person alluded to, the opacity was rather more advanced, but it was only when delicate tests were used that he was aware of the eye being defective. Previously to Mr. Walton's examination, he was ignorant of the existence of the fact.

BIRMINGHAM GENERAL HOSPITAL.

CASES OF EPILEPSY; WITH REMARKS.

By J. Russell, M.D.

[*Clinical Clerks*—Messrs. Walls and May.]

[*Continued from page 973.*]

The modified forms which epilepsy not infrequently presents, are represented in the history of certain of the patients.

Case XI. A man, aged 20, is subject to sudden attacks of peculiar sensations, seldom continuing so long as two minutes. He is seized with an indescribable sensation in his bowels; he feels as though he were about to faint, and sometimes falls and struggles, or "his body is drawn down"; consciousness is suspended for a moment, but he immediately recovers, and returns to his work. He can sometimes arrest the fit by walking about and rubbing himself. He had convulsions during dentition, and has suffered from the fits described ever since, sometimes at the rate of seven or eight in the day. During the last three or four years, he has been liable to regular epileptic fits; he may have had a dozen during that interval.

Case XII. In another patient, a man, aged 28, the abnormal sensations are more marked. He is "taken with the wind"; the sight of the left eye becomes dim, and if he close that eye, the dimness affects the opposite eye; the two inner fingers of the right hand are numbed, and the sense of numbness passes up the arm. He has then a sensation of a string tied round his lips, and his tongue feels swollen. Intelligence is never impaired, but he cannot express himself; he repeats the same words. The attacks last from three quarters of an hour to an hour, and are followed by drowsiness; for some time he cannot stand. He has much headache for the two following days. He has been subject to these attacks for eight years: they have been infrequent in their occurrence; of late, they have happened about once in six weeks. He has never suffered from a true epileptic fit.

In the following cases, the attacks presented aberrations of intellect.

In Case I, the epileptic fits were preceded for three years by sudden attacks of alarm: he cried out that "something was coming over him," and saw a variety of objects flitting before his eyes in rapid succession, which he could not describe. The expression of his face was "wild and staring," and he became dark under the eyes.

Case XIII. S. M., a girl, aged 11, suddenly runs to some one to hold her, becomes pale, and her lips livid; she trembles violently, and shed tears. She becomes, for the time, "quite deranged, and calls for all kinds of people." In the last six months, she has slept after the attack. She never starts in her sleep, but she dreams. She is anæmic, and has suffered from poverty.

Case XIV. J. B., aged 13, a delicate looking girl, three months ago, being in good health at the time, whilst assisting her mother, suddenly fell down, and lost her senses and her sight; her lips became purple, and her nose pinched, and she bit her tongue. The fits returned several times during the day and night, with a state of violent mania; on the following day, she had a similar succession of attacks, and the intervals then increased. She laughs, cries, and sings, in the fits; and after they have passed off, "seems quite mad," and talks wildly. As they subside, she complains of her head, and laughs or cries. No cause can be discovered; she is perfectly healthy.

Case XV. J. S., aged 25, a well made man, but intemperate, has been subject to epilepsy nine years. He has besides, what he calls "bewildering spells." He may be taken whilst at work, and on recovering finds himself at a distance, without having any idea how he came there; or if he be walking to any place, he discovers, on the subsidence of the attack, that he has been moving in a totally different direction. In one attack in the Hospital, he talked in a foolish manner, like a person intoxicated, stood up, and wanted to walk about, but was easily controlled: it passed off in a few minutes. In consequence of these attacks, he is unable to go to work, unless in company with some friend.

This man has also fits of "jerks", as he terms them, sudden startings of his limbs, which cause him to drop anything he is holding at the time, and not infrequently to fall down: "they come on like a gun"; they sometimes continue to recur for half a day, so as entirely to disable him.

These startings of the muscles also presented themselves in the different members of the family mentioned before. Thomas (VII) is affected with them in all parts of his body; they throw him down, or cause him to drop anything which may be in his hand; they compelled him to leave work; he is never free from them for more than two days. In William (VIII), they affect the left side of his body only, and are sometimes attended with a momentary loss of consciousness. Sarah (IX) is affected by them in all parts of her body; and Edward, who has not yet suffered from fits, is affected with these "jerks" in his arm.

[*To be continued.*]

LIVERPOOL NORTHERN HOSPITAL.

NOTES OF TWO CASES OF LITHOTOMY.

Under the care of G. M. Millett-Davis, Esq.

[*Communicated by* H. G. Earnshaw, Esq., *Senior House-Surgeon.*]

Case I. Peter S., aged 4, was sent up from the workhouse at W——, to be operated on for stone in the bladder, on May 11th. He came under the care of Mr. Millett-Davis, who in a few days performed the operation, and extracted an uric acid calculus, which weighed six drachms. For several days the boy progressed remarkably well, the wound healing nicely, and urine ceasing to pass through at about the tenth day. He then experienced a relapse, from some unknown cause. The wound began to gape, ceased to heal any further, and a dirty grey tenacious slough overspread its surface. The abdomen became very tender to the touch; mucus, and then pus-globules, as observed under the microscope, passed with the urine through the urethra in profuse quantities; his appetite and strength forsook him; and at length he became excessively hectic. As long as his stomach would endure food, he was liberally supplied with wine and light nourishment; but soon it rejected all that was given, except wine and milk-whey; he took of wine eight ounces in the twenty-four hours, and of whey from half a pint to a pint. Besides this, twice a day

friction of his body with cod-liver oil was employed; and he lay constantly in a flannel dress, kept saturated with the oil. In a few days after the adoption of this treatment, he began to revive, and convalesced rapidly. He was kept in the hospital three or four weeks longer than was at all necessary for the cure, and was at last discharged, in a plump healthy condition of body, on August 9th.

CASE II. John J., aged 16, was sent up from the same place on September 29th, to undergo a similar operation, and fell under the care of the same surgeon. He had suffered from symptoms of stone for twelve years, and was extremely emaciated. It was at first determined to allow a week or two to elapse before the proceeding, in order that the boy might become habituated to the air and system of the hospital; but it was shortly found expedient to operate at once, the boy's sufferings at each movement in bed and effort to pass urine rendering life miserable to him. A large mulberry calculus, weighing six drachms and twenty grains, was accordingly extracted, through a remarkably narrow subpubic arch, on October 3rd. The boy got well quickly, and went out of the hospital of his own accord, cured, on the 28th of the same month.

Original Communications.

THE PATHOLOGY, DIAGNOSIS, AND TREATMENT OF CARDIAC DISEASES.

By W. O. MARKHAM, M.D., F.R.C.P., Physician to St. Mary's Hospital, London.

VI.—TREATMENT OF PERICARDITIS. GENERAL REMARKS; BLEEDING; MERCURY; OPIUM; GENERAL AND LOCAL TREATMENT; PARACENTESIS OF THE PERICARDIUM; PERICARDIAL ADHESIONS.

[*Continued from page* 891.]

Salts of Potash. Extended observation has proved that in the treatment of acute rheumatism there is no remedy which has such a powerfully beneficial influence over the disease as the salts of potash, when administered in sufficiently large doses. The proof of this assertion is to be found in the results of our daily practice; and in the concurrent—I may say, universal—testimony of competent observers in different countries.* The remedy, indeed, is entitled to be considered as something of a specific in this disease, so constantly are the expected results found to follow its proper use. From one to two scruples, according to the age of the patient, of the bicarbonate of potass are to be given for the purpose every second hour, as prescribed by Dr. Garrod. A marked amelioration of the symptoms is generally—though, I admit, not invariably—observed to follow its administration in the course of about twenty-four or thirty six hours; in fact, whenever the urine becomes alkaline.

Now, inasmuch as we are bound, in all reason, to believe, that the *materies morbi* which produces the rheumatic arthritis is identical with the *materies morbi* which produces the rheumatic pericarditis, we should, to follow out a rational treatment, anticipate that this remedy would be also efficacious in preventing, or arresting the progress of, the pericardial inflammation. The fact is not, for obvious reasons, easy of demonstration, but observation most certainly tends to show the correctness of the conclusion. The authority of many competent observers might be cited in support of the opinion thus expressed by Dr. Garrod: "Besides the influence on the duration of the articular affection which has been alluded to, I cannot help thinking that an effect is likewise produced on the cardiac disease, to a very considerable and important extent. In no case did the affection of the heart ensue after the patient had been more than forty-eight hours under the influence of the medicine; and it has appeared to me, that even when present on admission into the Hospital, or coming on within a short period, its progress was powerfully checked by the treatment, and prevented from producing the terrible mischief which, when uncontrolled, it so frequently induces; this I should be inclined to ascribe to the altered condition of the blood, and especially of that portion giving rise to fibrinous deposits on the peri- or endocardium." (*loc. cit.*)

My own observation fully bears out Dr. Garrod's statement; and, necessarily, therefore, leads me to the conclusion that we possess no remedy more efficacious than this, in the treatment of acute rheumatic pericarditis, *quoad* the diathetic character of the disease. Its action is, we must suppose (from its manifest influence over the arthritis), the neutralising of that poisonous element, whatever it be, which occasions the local inflammations—the arthritis and pericarditis; arresting the progress of the inflammations, when they have already seized upon parts, or anticipating and preventing the seizure.

Opium. I have already mentioned, that the pain and sufferings which afflict the patient during the progress of acute rheumatism are sometimes very grievous to bear; they are especially so, when severe arthritic affections coexist with the pericarditis. In cases of this kind, it is absolutely necessary to tranquillize the nervous system. We must remember, that the shock of violent and sudden pain will occasionally destroy life; and that a lesser degree of it, unceasing and severe, will likewise kill, by wearing out and exhausting the vital powers of the patient. Now I have warned the student, in speaking of bleeding, that the vital powers of the heart are apt to fail suddenly in pericarditis, through paralysis of its muscular structure. For a double reason, therefore, should he strive to remove or subdue the effects of this other exhausting influence—the pain.

In this, as in so many other diseases, long restlessness and sleeplessness, the results of pain and suffering, are unfavourable symptoms. Sleep, then, must be procured; and, administered to this end, opium will act with all its magic charms. Indeed, it has been thought that opium has an effect which reaches beyond the immediate object sought for,—beyond the procuring of rest and the alleviation of pain. Judging from the manifest signs of improvement in the inflammation, which occasionally follows its administration, some observers have ascribed to the drug a direct influence in arresting the inflammation.* The quantity of opium administered, must be measured by the degree of pain suffered; and the large doses of it which even young children will take with impunity, in these cases, is surprising. I have seen this remedy very extensively used, for this purpose, in St. Mary's Hospital, by my colleague, Dr. Sibson. The opium he gives to an adult, in doses of one grain, mixed with half a grain of compound colocynth pill, every two, three, or four hours, sometimes every hour, for many hours together, until the main object of its administration—relief to the patient's sufferings—is obtained. It is very rarely, that any of what are considered the ill-effects of opium are observed to follow this use of it. It is not found to "lock-up" the secretions, or to contract the pupil. It acts favourably on the skin, as an "eliminator"; it takes the patient pleasantly—"jucundè"—through his disease; and is often followed by a rapid convalescence.

Whether the opium has any directly beneficial influence over the local inflammation has yet to be proved. The solution of such a question is manifestly one of exceeding difficulty. In the cases of Dr. Sibson above referred to, the drug was never exhibited alone; and probably few physicians would consider themselves justified in so using it. Whenever I have seen it given, or have used it myself to produce, and keep up, a quiescent and soporific state, the potash treatment has been always simultaneously followed out. Besides this, we have yet to learn, how the pericarditis would eventuate, if left entirely to itself; and we must remember, that acute rheumatic pericarditis very rarely ends fatally, *in a first attack*, under any kind of treatment. But, if it be difficult to determine, whether the good effects of the opium result altogether from the allaying of the pain and nervous excitement, which, in young, weakly-constitutioned individuals, are especially severe in this disorder; or, if they result in part, also, from the direct influence of the drug over the inflammation—however this

* The following are a few of the authorities who may be referred to on this point:—Dr. Basham gives from one to three ounces of nitrate of potash in four pints of water during the twenty-four hours. (Med. Chir. Soc. Trans., 1848.) Gendrin also gives nitrate of potash. (Med. Gaz., 1848.) Dr. Golding Bird used the acetate of potash in doses of half an ounce in the twenty-four hours much diluted. Dr. Swett administers one drachm of the tartrate of soda and potash every two or three hours, until the urine becomes alkaline. (New York Med. Times, 1854.) Dr. Garrod's method is to give two scruples of the bicarbonate of potash every second hour, night and day, in a wineglassful of water, "until the joint-affection has ceased for three or four days." (Med. Chir. Trans., 1855.) To this excellent paper, I would especially call the attention of those desiring particulars in this matter.

* Dr. Graves, in speaking of a case of acute pericarditis, says: "The treatment consisted of opium in large doses, one grain every three hours; it succeeded admirably, and seemed to expend itself solely on the disease, not producing the ordinary symptoms, headache, hot skin, furred tongue, or constipation." (Lect., ii, 161.)

may be—of the good effects themselves, thus produced by the drug, I cannot doubt for a moment.

During the whole treatment of pericarditis, the secretions should be duly attended to. The bowels should be regularly relieved, and the action of the skin and kidneys maintained. Frequent purging, however, must be avoided; for the partial exposure to cold, which is its necessary consequence, and the extreme pain and suffering which movement is apt to occasion in these cases (especially when the coexisting inflammation of the joints is severe), sometimes more than counterbalance, by the nervous excitement and general disturbance they produce, the good which the purging might be supposed otherwise to bring about, as a process of elimination.

The *general* treatment, then, of rheumatic pericarditis is in the main—at least, during its first periods—the treatment of acute rheumatism. But the local inflammation demands especial consideration. In the commencement of the inflammation, the local abstraction of blood, proportioned to the degree of local pain, the strength of the patient, and the period of the disease, is generally of service. Should there be signs of severe pulmonary and cardiac congestions, then small venesections will be required for their relief. Warm fomentations or poultices should be constantly applied over the præcordial region. This method of bringing warmth to the inflamed part is of very great service; it gives much relief to the patient; and is worthy of more attention than is generally given to it in this country. The beneficial effects of blisters have been doubted by some observers; but I have so often seen them followed by mitigation of the local pain, and apparently also by diminution also of the pericardial effusion, that I do not hesitate to use them, when the first acute periods of the inflammation have passed away. They do not prevent the application of poultices or fomentations.

At this period of the disease, another most important object, arising out of relation of the inflammation to the heart, presents itself to our consideration.

In every case of pericarditis, indeed, whether rheumatic or non-rheumatic, and at all periods of the inflammation, we should carefully watch for signs of the heart's failing powers. Weakness, in this disease, is apt to manifest itself suddenly. This warns us to be cautious, in the first instance, that we do not injure the patient by depletion; and it also warns us not to delay too long the use of stimuli. There are cases, especially of the non-rheumatic class, in which stimuli are requisite from the very beginning of the attack; the condition of the system, under which the pericarditis has arisen, demanding their use.

This attention to the condition of the heart in pericarditis is a point upon which Dr. Stokes has especially insisted; and, there can be no doubt, most wisely. He is "convinced that patients are often lost from want of stimulation at the proper time." The following are the particular signs, which he has given, as indicative of a weakened condition of the organ: a feeble, intermittent, and irregular pulse, especially when it has not had these characters from the first; turgescence of the jugular veins; change in the heart's sounds, particularly feebleness of the first sound; pallor, coldness of skin, œdema, and faintings.

Here I would again impress upon the student the facts: that, inflammation is a sign of weakness not of strength; that in every inflammation where exudation has taken place, there is a process of absorption and reparation to be gone through, if the parts affected are to regain their integrity; and that for the proper furtherance of this process, vital force is absolutely necessary. Sinking or weakness of the vital powers should, therefore, be carefully anticipated in all inflammations; but especially so in pericarditis, because, here the paralysing effects of the inflammation fall directly upon the central organ of the circulation. Light and easily digestible nourishment—milk and weak broths—should therefore be assiduously administered during the earliest periods of the inflammation; and stimuli, when the acute period has ceased, and the process of absorption has commenced, or whenever the signs of enfeebled circulation begin to show themselves.

Observation, indeed, certainly seems to prove, that rheumatic pericarditis is an inflammation which rather attacks those of weak than of strong constitutions; that it is more common in the delicate and young, than in vigorous persons at the prime or middle periods of life; and that the degree of inflammation—that is, the general febrile re-action and the local exudation—is also greater in them than in the strong. The disease is sometimes especially severe in young females, and in such cases, the violence of the inflammation is shown by the abundance and rapidity of the pericardial exudation.

From all which considerations, this corollary necessarily results, viz., that in the treatment of pericarditis, the administration of our remedies must be measured by the general condition and the idiosyncrasy of the individual attacked, rather than by the intensity or other peculiarity of the local inflammation. And herein—in seizing upon the special points of the individual case, and in modifying the remedies to meet their requirements—lies that peculiar practical tact which distinguishes the skilful physician.

[*To be continued.*]

CONTRIBUTIONS TO CLINICAL SURGERY.

By Oliver Pemberton, Esq., Surgeon to the General Hospital, and Lecturer on Surgical Pathology at Sydenham College, Birmingham.

VI.—Excision of the Knee.

[*Concluded from p.* 979.]

The foregoing cases illustrate most of the complications which are likely to be encountered in undertaking the operation of excision of the knee. They afford an example of death from pyæmia, from shock, and from prolonged suppuration. They also show that inflammation of the shaft of the femur and secondary hæmorrhage are events liable to take place as sequences of the proceeding, whereby the recovery of the patient, and the utility of the limb to be preserved, are perilled in the gravest degree.

Of 160 cases of excision of the knee performed up to December 1858, of which particulars have been gathered by Mr. Price (*Med. Times and Gazette*, April 1859), there were 32 fatal cases. Of these, 8 died of pyæmia. This places pyæmia at the head of the list of the causes of death after the operation. It is, however, not a rate of mortality from this one special cause comparable with what occurs in amputation of the thigh for chronic disease, from a similar one. (*Upon the Causes of Death after Amputation.* T. Bryant. Med.-Chir. Soc., Feb. 1859.) Hence we have no cause to fear that there is anything in the operation of excision of the knee specially favourable to the development of pyæmia.

Case II was well suited to the operation, so far as could be ascertained during life. The disease was evidently of a scrofulous character, having its earliest origin in the cancellous structure of the articulating extremities. The boy's general health was also satisfactory, considering his strumous diathesis and long residence in the hospital. Moreover, the condition of the knee, exhibited at the *post mortem* examination, was everything that could be expected or desired, considering the short period which had elapsed since the operation; promising, indeed, in all respects, the most favourable result.

It should here also be remarked as singular, that, although there was effusion of pus into so many joints, yet there was none to be detected either between or around the sawn extremities of that one which had been the seat of operation.

In Case III, the operation was undertaken in the hope that an useful limb might be obtained in the place of a deformed one. The child, however, died of shock, three days afterwards. I believe that the chloroform had quite as much, if not more, to do with this result than the so-called shock of the operation. All observers concur in noticing the small amount of shock following this proceeding, as a general rule—a circumstance that entirely accords with my own experience, as, with this exception, out of twelve instances in which the operation has been performed in the General Hospital, no other case exhibited its occurrence. Of the 160 cases above referred to, but four succumbed to shock or the immediate effects of the operation—a proportion so small as at once to remove all doubts on the subject.

Deformity of a limb, as in this case, may call for the excision of the articular extremities, even where all active disease has subsided; and in adults—for, in the face of our present experience, we cannot speak with confidence as to children—where rectangular anchylosis or dislocation of the leg-bones backwards is the result of the cure of the earlier disorder, there can be no question that we have a large class of cases that

promise the best results, as to strong and useful limbs, in the selection of this method of treatment.

The death in Case IV comes under the head of exhaustion—prolonged suppuration. The long time—five months—that this patient resided in the wards of the hospital, in the hope of obtaining a stiff knee, formed a bad preparation for any operative proceeding; still worse, perhaps, for one of the kind we are illustrating. Erysipelas and confluent small-pox, however, were complications too grave and unusual to leave much prospect of repair in a constitution already so weakened, even if the state of the excised joint had promised a more favourable issue. But the suppuration was profuse and continued, so much so that amputation, had the patient's health permitted, must have been proposed. She died with large cavities in her lungs, the results of tubercular softening, twelve weeks after the operation. I do not hesitate to say, on a review of the features of this case, that it was not well suited to excision. We must ever bear in mind, when we recommend its adoption, that, in the majority of instances, we shall have to encounter lengthened suppuration. With this conviction before us, therefore, and a doubt as to the constitutional vigour of our patient, it will be better for the safety of the individual, as well as for the credit of this particular measure, that we enforce, in such an instance, the removal of the disease by amputation of the limb, despite the solicitations we may receive to the contrary.

Acute destruction of the cartilages and synovial membranes has not been considered a class of cases suited to excision. The more chronic the state of the disease in these parts, the better the prospect of the issue.

Case V illustrates, I believe, an exceptional success, though Mr. Hancock, in the Charing Cross Hospital, also met with good fortune in a boy, aged 7, in whom he excised the knee for acute suppuration. (*Lancet*, June 20th, 1857.)

In the case I have narrated, the disease evidently arose in the synovial membrane, and, after a time, suddenly and rapidly went on to suppuration and destruction of the soft textures within the joint. The immediate effect of the operation in arresting the hectic and other alarming symptoms, was as marked and as satisfactory as possible. Amputation could not have removed them more completely. But what followed? The shaft of the femur, as high up as the trochanter, became the seat of active inflammation. Ten months after the operation, this had resulted in the thigh-bone being so greatly enlarged as to be two or three times greater than its fellow; whilst numerous sinuses became established along its length at intervals, as well as about the seat of the wound and the upper part of the tibia.

I am not aware of inflammation of the tissue of the shaft of the femur, accompanied by expansion of its structure and by fresh osseous deposit, having been observed as a consequence of excision of the knee. The operation may give rise to it, nevertheless; and the circumstance of its contingency should not be lost sight of. I saw it myself follow excision of the head of the femur, in a case submitted to operation by Mr. Crompton. Mr. Arnott, also, in a remarkable instance in which he excised the elbow, lost his patient in consequence of the severe constitutional disturbance set up by inflammation having ensued in the remaining portion of the humerus. (Stanley's *Treatise on Diseases of the Bones*, p. 19.) Where so serious a complication does take place, not only is the patient's life endangered, but the part becomes for years a source of pain and misery, in consequence of the vast necrosis which is almost certain to arise.

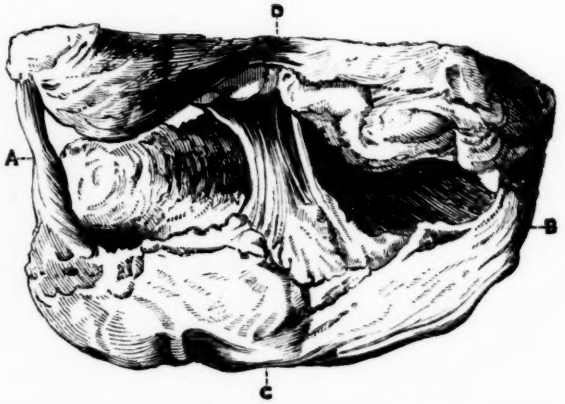
This condition of extensive inflammation of the shaft of the femur must be separated altogether from the not infrequent occurrence of necrosis of the sawn extremities—perhaps one of the untoward results of the operation most likely to necessitate amputation. The latter is absolutely a bar to all repair; whilst, in the presence of the former, satisfactory consolidation of the parts may be obtained. Necrosis, where it occurs, arises most frequently from an undue separation of the periosteum during the operation, from a bad adjustment of the ends of the bones subsequently, or from the case having been unsuited to the proceeding. The inflammation of the bone I have described in Case V arose independent of these circumstances. Here the periosteum was not separated; the perfect adaptation of the articular extremities was in noways disturbed; the union, though not osseous, was so firmly fibrous and consolidated as to permit of the least possible motion; and the case, so far as the bone was concerned, offered no obstacle to a favourable result. Notwithstanding, bit by bit the entire shaft of the femur, either through the mischief aroused in the periosteum or in the cancellous tissue, became painful and enlarged, and, affecting the soft parts, at the end of twelve months was only then quietening down in the prospect of interminable necrosis.

The amount of hæmorrhage attendant on the operation of excision of the knee, considering the length of the incision of the soft parts, is remarkably small, less considerably than what occurs in an amputation of the thigh. But, satisfactory as this is, and admitted as it is on all sides, we must not lose sight of the fact that secondary hæmorrhage has taken place in several instances. Case VI, after having required, at the operation, the placing of a ligature on an enlarged superior external articular artery, was the subject of alarming secondary hæmorrhage from the situation of this vessel six days subsequently. Pressure on the main artery at the pubic arch happily sufficed to arrest it; but the patient's life trembled for many weeks in the balance, in consequence of the mishap.

Case VII exhibits very strongly the most favourable aspect of this operation—complete removal of disease, and rapid recovery. From the circumstances of this case, I anticipate, in the future, the confirmation or removal of my present doubts in reference to the subsequent growth of the limb. We have in it all the features believed most calculated to ensure corresponding development. These are—

The removal of as small a quantity of bone as possible;
The leaving the epiphyses untouched;
The bony union of the sawn extremities.

Adding to these circumstances the healthy condition and vigorous constitution of the boy, we may consider that, if the limb can grow after the operation, it possesses every chance of doing so in this instance.



View of the sawn articular extremities removed in their connected state. A, Remains of external, and B, of internal lateral ligaments. C, Section of head of tibia, showing remains of crucial ligament in centre and on either side the bone, deprived of cartilage. D, Section of condyles of femur.

The accompanying woodcut of the sawn articular surfaces in this case illustrates very clearly the description I have previously given of their removal, with such remains of the ligamentous structures as may have escaped destruction by disease still connecting them together.

Important as are the points illustrated in the foregoing cases, their importance is of little moment in comparison with the necessity that exists in regard to a correct appreciation being formed of the class of cases best suited to excision in preference to amputation; for, although the circumstances which necessitate amputation are also those which indicate excision, yet the particular operation cannot be chosen indiscriminately in all cases.

Limiting our remarks on this question, in the face of our present experience of the operation and its consequences in children, to cases occurring in adults, we must admit that each of these operations possesses certain advantages over the other, and it only remains for us to determine what are the special circumstances which should induce us to have recourse to the one in preference to the other.

In chronic cases of diseased articulations requiring an operation, the state of the bones and the soft parts must be attentively considered.

Those cases will be found most eligible for excision where the mischief in the bone is limited to the articular extremity, and where the soft parts have not become adherent to the

parts beneath, from the presence of sinuses, or from the general effects of long continued disease.

Where the disease in the bone cannot be removed without the sacrifice of too great an amount, or where the soft parts around the joint have assumed an unhealthy character, amputation should be preferred; a vigorous condition of the latter structures being quite as essential to subsequent repair and well-doing as is a section through sound bone for the attainment of satisfactory osseous or fibrous union. Cases in which there has occurred the most complete alteration of the synovial membranes, accompanied by destruction of the cartilages, together with the ligamentous tissues, so long as the bones and soft parts are affected within the limits laid down, will be equally suitable to excision.

In forming our judgment, the constitutional power of the patient must not be disregarded. There are many instances of knee-diseases, requiring an operation, in which the pulmonary tubercular tendency is also manifest. The disposition to mischief in the lungs in these cases renders them, in my mind, ineligible for excision—in fact, unable to bear prolonged suppuration; whilst the removal of the disease by amputation, followed by the rapid recovery usual in such persons after such an operation, is well known to be attended by the happiest results.

In acute cases of diseased articulations, with suppuration, the selection of excision must be attended with great hazard. The occasions on which this has been done are very few, and I have already alluded to the subject when relating Case v. Free incisions into the cavity of the joint should be made, in the hope of thus relieving the disorder and obtaining anchylosis, in preference. The constitutional powers not admitting of this treatment, it will be better, then, to recommend amputation rather than resort to excision.

For deformity, and for accident, we may be also called on to recommend excision.

In the first class of cases there are many well suited to the proceeding. Among these are rectangular anchyloses, or where dislocation of the tibia backwards has occurred as the result of former disease. Such cases afford every prospect of an useful limb being obtained in the place of one not only a deformity, but an incumbrance.

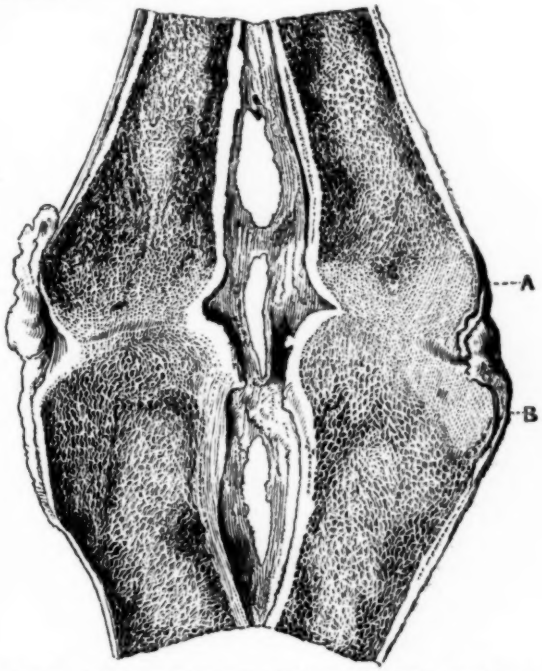
In the second, at present, our experience is very limited. Mr. Canton, in the Charing Cross Hospital, performed the operation (*Lancet*, August 1858) in a boy aged 8, who had received an injury to the lower end of the femur, whereby the epiphysis had been separated from the shaft. The case did well. My friend Mr. Lakin (*Midl. Quart. Jour.*, Jan. 1858, p. 37), late assistant-surgeon to the General Hospital in Camp before Sebastopol, also resorted to the proceeding in the case of a private of the 77th Regiment, who was wounded by a musket-ball which had penetrated the inner condyle. The case did well for twenty-six days, and then sank from diarrhœa and exhaustion. This was the only case that occurred in the Crimea.

The advantages of this proceeding in cases of accident must be, therefore, at present ranked as conjectural; but there would appear to be no valid reason why a primary operation of this character should not succeed in removing the impending danger of a compound fracture or laceration of the knee-joint as thoroughly as an amputation through the thigh.

The character of the medium binding the sawn articular extremities together, in the most favourable cases, will be found to vary very much. In some cases, bony union does not seem attainable by any amount of care and quietude; in others, it is as rapid as unexpected.

Whilst, therefore, we may devote all our attention to the securing anchylosis, if possible, as promising, under all circumstances, the most serviceable limb, we need not be disappointed at there being a limited movement allowed between the bones when the cure is complete, as, in many instances where such a condition has been observed, the limbs have been, in their utility and power of endurance of fatigue, everything that could be desired; the only precaution to be kept in view being the necessity there is for wearing, under such circumstances, a splinted knee-case.

Where bony union is complete, and the apposition of the bones satisfactory, it is impossible to imagine a consolidation more calculated to bear the wear and tear of the labourer's or mechanic's life. The accompanying woodcut of the appearances presented by the anchylosis of bones of the knee-joint, after resection, will bear out the truthfulness of these remarks. The operation in this case was performed by my friend and colleague Mr. Crompton, who has permitted me to record here by a drawing a most accurate description of so rare and valuable a specimen.



Section of the bones in Mr. Crompton's case of excision; showing at A and B, the bony union of femur and tibia.

The patient in this case, a delicate looking man, aged 28, had suffered from strumous disease of the knee for some thirteen years, and had been, at its first onset, an inmate of the hospital. Anchylosis had to a certain extent taken place, and for a long time the mischief had been quiet. Latterly, the disease in the bones increasing, sinuses formed, and the limb becoming useless and painful, he was compelled to seek once more for relief. The knee was excised in June 1858, about an inch of bone being taken away. He died of phthisis, fifteen months after the operation. The line of union will be observed to be slightly curved. This did not interfere in the least degree with the strength or value of the limb. The broader bearing surface of the tibia is marked, in comparison with that afforded by the femur. This was owing to the necessity of a larger portion of bone having to be removed from the condyles than ordinary; but the appearance displayed at the line of junction of the sawn surfaces in this specimen shows the importance of the section through the condyles being made so as to leave as wide a surface as possible to correspond to the one at the tibia.

It will be noticed, also, that the patella was removed; and it was so on account of its being extensively diseased. It is difficult, however, to see in what way this bone, had it been in a state to have been left, could have added to the material strength of the union. I prefer, for my own part, in all cases, now, to take away the patella. When left, it is always unsightly, frequently the seat of subsequent mischief, and very rarely of any advantage to the power of the limb.

PATHOLOGICAL AND THERAPEUTICAL CONSIDERATIONS RELATIVE TO INFLAMMATION AND FEVER.

By C. Handfield Jones, M.B., F.R.S., Physician to St. Mary's Hospital.

[*Continued from page 958.*]

11. *Fever.* The relation which the febrile state bears to disorder of the nervous system is a subject of high interest and importance. It did not escape the notice of Hippocrates, as shown by his aphorism, πυρετος λυει σπασμους. It does not seem necessary to discuss very curiously what is to be considered fever. Increased temperature is doubtless the capital phenomenon, and next to that may be reckoned accelerated

and excited action of the heart, a sense of prostration and uneasе, delirium, dry skin, loss of appetite, thirst, diminished and disordered secretions. In the asthenic forms of fever, the excitement phenomena are much more feebly marked, and almost merged in those of general depression; the secretions are no longer scanty, it may be increased, and the heat of the surface much less noticeable.

Debility of the cerebro-spinal system alone does not seem to have any direct effect in producing fever. We see patients repeatedly who are extremely weak, with a small and languid pulse, yet quite without fever. On the other hand, exhaustion does seem, *per se*, to be capable of inducing fever. Overexertion in walking will certainly cause pyrexia in certain persons. Again, all the phenomena of the earlier periods of fever are indicative of depression, and in the prevailing fevers of our day the stamp of debility is apparent throughout. The experiments of Bernard are very suggestive of the view that weakening, or paralysis of the sympathetic system generally is an essential condition in fevers. If we suppose the effects produced by dividing the sympathetic in the neck to be general, *i.e.*, to occur all over the body, there would ensue general pyrexia. In making this statement I do not overlook that Bernard (*Op. cit.*, vol. ii, p. 526) finds that certain parts of the sympathetic may be divided without the supervention of any apparent phenomena of calorification, or vascularisation, in the organs to which they are distributed. He instances especially the splanchnic nerves. But of these very nerves, Cruveilhier has written that they are white nerves, "n'ayant nullement l'aspect des nerfs ganglionnaires," and further, in tracing their origin, he remarks that, "l'anatomie de texture démontre de la manière la plus évidente la continuité du nerf splanchnique avec les paires rachidiennes." If, then, the splanchnic nerves are rather commissural cords of the cerebro-spinal system to the sympathetic centres than actual nerves proceeding from their ganglia, we should not expect that their section would have any effect on temperature, etc.

12. Let us now consider how far the phenomena in various forms of fever may be explained or elucidated, by assuming that the sympathetic system is in a state of more or less complete paralysis. In asthenic fevers, such as our typhoid, or typhus, we may conceive a poison to have entered the blood, and to have enfeebled, primarily, the sympathetic system, and subsequently the others. All the phenomena well accord with this hypothesis. The various complications, enteric, pneumonic, or cerebral of our low fevers, may be accounted for by supposing the poison to affect more especially the vaso-motor nerves of that region in particular. The hyperæmia, for instance, of the intestinal mucous membrane in typhoid, is just of that kind which would be produced by a paralysis of the vaso-motor nerves of the nutrient arteries, it is evidently not an inflammation originated in the tissue. The hypertrophy of the *glandulæ solitariæ* and *agminatæ* is also a consequence of the same nervous disorder, and is quite analogous to the enlarged spleen of ague, or the goitre of Swiss malaria. To regard it as an act of attempted elimination seems to me quite a mistake. It is no more to be considered in that light than the enlargement of the correlated mesenteric glands is, which takes place at the same time. Both are similar structures, and both hypertrophy under the same influences, viz., hyperæmia and loss of nerve influence. The most successful treatment of these fevers is quite in accordance with the above view. The frequent administration of muriatic acid, or of moderate doses of quinine, of wine, and of easily assimilated nourishment, manifestly avails by supporting and raising the failing nervous power.

I cannot withhold here an expression of dissent from a practice which I often witnessed in my pupil days, and which is still, to some extent, in vogue; viz., that of administering hydrargyrum cum cretâ and Dover's powder, twice daily, in most, if not all cases of low fever. I cannot but think that the tendency to ulceration and perforation of blood-vessels, or of the intestinal parietes is materially promoted thereby.

It is quite evident, and quite in harmony with the above view to observe that the other systems in low fever are stricken by the same enfeebling influence as the sympathetic. The quiet, muttering delirium, or unconsciousness, or half-consciousness, testifies how the brain is enfeebled; and the weak pulse during life, and the softened texture after death, tell how the heart is weakened. Nay, in certain cases, or certain periods of fever, it may be that the sympathetic system is but little affected, and that the stress of the disease falls on the cerebro-spinal. This seems to have been the case in the instances noticed by Graves (*Clin. Med.*, p. 157), where he says, "thus it was very curious to see a patient with a skin of a natural temperature, a perfectly natural pulse, tranquil respiration, clear eyes, no headache, a soft and fallen abdomen, incoherent, or with a low muttering delirium, excessive subsultus, extreme debility." I may remark here on the expression used by the same author (*Op. cit.*, p. 190-191), "pure nervous fever," in describing cases where thirst, hot skin, quick weak pulse, occasional delirium, and watchfulness were the main symptoms, without any trace of local inflammation being detected during life, or at the *post mortem* inspection. The observation of the practical physician, that in the purest form of fever the nerve-system is the only one implicated, is of great interest in reference to the subject of our present consideration. In such fevers the poison must be supposed to affect the vaso-motor nerves in a less degree.

13. Let us now turn to the opposite type of fever, the *sthenic*, marked by strong, frequent, full or hard pulse, dry, hot skin, laboured respiration, diminished or suppressed secretions, flushed face, etc.; in which blood-letting is not only tolerated, but is essential to the preservation of life. It is evident that in such cases the greater part of the organs must be in a very different vital state to that which exists in low fever. Let it be assumed that the poison acts primarily upon the sympathetic system, limiting its action to it, as woorari does to the motor nerves: increased heat will be developed, and a tendency to local congestion, varying in situation, according to the part where the paralysis is greatest. The increased temperature will act as a stimulus to the heart, whose tissue is vigorous (not debilitated, as in asthenic fever), and capable of responding energetically. The circulation will thus be excited, and thus the character of the pulse is explained, except as relates to its hardness, a point which we shall subsequently notice. The very interesting experiments of M. Calliburcès, mentioned in Bernard's *Leçons* (vol. ii, pp. 395-403), corroborate the opinion advanced above, that the increased temperature is the cause of increased cardiac action. He found that when the leg of a frog was dipped into warm water, the heart constantly contracted more frequently. Thus, the number of pulsations in three separate trials being 52, 32, 42, at the commencement, a temperature of 51°, 50°, 55°, raised (respectively) the number of beats to 90, 64, 100. Similar results were obtained when the heat was applied directly to the heart. Ligature of the vessels, and section of the crural nerve did not prevent the increase of cardiac action from the application of heat to the leg. He concludes that the acceleration of the heart's action by heat, is owing to the direct action of the stimulus upon the circulatory centre.

At the same time, the cardiac muscular tissue, like all others, has, temporarily, its vital energy increased by the dilatation of the coronary arteries, and the freer circulation of the blood through its substance, as well as by the increased local heat. Thus, the contraction of the heart will not only be more frequent, but more energetic. The same will occur also in sthenic pyrexial fever.

It might have been expected that, as on this view the prime motor of the fever is the palsying action of a poison on the sympathetic system, the administration of tonics would have proved beneficial by resuscitating the failing power. It is not yet fully shown what might be the effect if the remedy (say quinine) was given before the reactionary phenomena set in; but it is quite intelligible that it would only be injurious when the febrile state was fully established, and most of the bodily organs were in a state of irritation. Thus, quinine is of no advantage during the hot stage of an ague; it is when the temporary reaction has passed by that its opportunity comes.

14. *Inflammatory Fever*, intending thereby the fever of inflammation, may next be considered. This, in the cases we are speaking of, is dependent on the local disease. It is probably excited by a morbid impression being conveyed from the inflamed part to the sympathetic centres, in consequence of which, by a reflex inhibitory action, the vaso-motor nerves are generally enfeebled, and so, as in other cases, fever results, with increased cardiac movement.

The production of pyrexia is the ordinary case, the exceptional is that already mentioned (*vide* p. 957), where inflammation of some organ, the kidneys, for instance, occasions paralysis of musculo-motor nerves. On the view just proposed, it is intelligible why the administration of tonic and nervine medicines is injurious in the pyrexia of sthenic inflammation. The inflamed tissue becomes further irritated by the tonic remedy, and so the morbid impression conveyed to the centres, and reflected on the vaso-motor nerves, becomes intensified. By the

employment, on the other hand, of tissue-sedatives, the morbid stimulus is annulled, and the fever movement subsides. Should, however, the paralysis of the sympathetic system have been considerable, it may persist to some extent after the cessation of the inhibitory influence, and may then require the arousing action of such remedies as quinine, and the like.

It is possible that the increased cardiac action in inflammatory fever may also, in part, be occasioned by the local irritation in the inflamed part being reflected directly upon the heart, through the sympathetic ganglia and nerves. The innervation of the organ is thus enfeebled, and, as a consequence, its action accelerated. At the same time the increased heat of the blood stimulates its muscular tissue.

15. The hardness of the pulse in certain sthenic fevers and inflammations implies a contracted state of the arterial coats. This, if general, is an opposite condition to that which is produced by section of the sympathetic, and therefore demands explanation in an hypothesis which is based on a presumed palsy of the system. Now, in sthenic fevers, the primary paresis of the sympathetic gives rise to an abnormal stimulus in the increased heat of the blood, which is by no means inseparably connected with arterial dilatation (*vide* p. 939). The arterial coats, like the heart, retain for a while their irritability, and contract under the direct stimulus of the fevered blood which traverses them. The pulse is therefore hard. In low fever, on the contrary, the pulse is weak and soft, because the poison impairs the vital power of the arterial coats, as well as that of the sympathetic.

So in certain inflammations—*e. g.*, of serous membranes—the hard pulse, as well as the increased cardiac action, result from the circumstance that the contractile tissue of the heart and arteries is at first unimpaired in its energy, and responds actively to the stimulus of the heated blood. In asthenic inflammation, on the other hand, the vital energy of the heart and arteries is impaired by the exciting cause, and their contractile power is enfeebled. Hence the pulse is soft and weak. In the former case, bleeding is borne well; in the latter, badly.

The causes of *increased action* of the heart require some notice. The action of the organ may be increased as to *frequency*, or as to *energy*, or, as often happens, as to both simultaneously. There is, however, no necessary or close connexion between the increase in these two respects. Increased frequency is very commonly conjoined with debility. Acceleration of the heart's action seems chiefly to proceed from partial exhaustion of nerve-force;* *e. g.*, it takes place readily in the feeble and those of weak innervation, whose hearts palpitate violently on the least exertion. It can be prevented by exercise and training which increase the nerve-force, as when a man trains himself for feats of running or swimming; it is diminished, when present, by a stimulant, viz., digitalis, which tones, steadies, and strengthens a weak flabby heart, just as it does a relaxed uterus. On the other hand, increased energy of contraction in the heart depends chiefly on a vigorous, lively, well nourished condition of its muscular fibre, which responds actively to the stimulus of the circulating blood. It is therefore impaired by all influences of an enfeebling or lowering kind, as the poison of influenza or of low fever. In states of sthenic inflammation, on the contrary, the contractile energy of the heart remains for some while unimpaired, or even is actually increased; venesection is borne well, the heart still responding actively to the diminished amount of its normal stimulant. In asthenic inflammation, the reverse is the case. In many instances of increased cardiac action, where the heart is acting quickly and sharply, though, as the feeble pulse shows, with little propulsive power, it seems tolerably certain that the endocardium must be abnormally impressionable, the blood traversing the cavities producing too great a stimulating effect. The condition in this case is analogous to that of gastric hyperæsthesia, where the mucous lining of the stomach is unduly sensitive, and the contact of ingesta provokes abnormal contractions, viz., those of vomiting. Such hyperæsthesia is a common attendant upon states of debility.

[*To be continued.*]

* This view is, of course, based on the well-known experiments which show that galvanic stimulation of the vagi slows and stops the action of the heart, while section of the same nerves accelerates it. In one experiment I performed, after the left vagus had been divided, the heart's beats were 110 in the minute; after both had been divided, 190. The respiratory movements in the last case were about ten per minute.

Notes of Lettsomian Lectures
ON
CERTAIN POINTS CONNECTED WITH DIABETES.

DELIVERED BEFORE THE MEDICAL SOCIETY OF LONDON.

By FREDERICK WM. PAVY, M.D., F.R.C.P., Lecturer on Physiology at Guy's Hospital.

Lecture II.

[*Delivered November 30th*, 1859.]

Having found that the blood in the right cavities of the heart did not contain sugar, but still believing that sugar was formed in the liver, Dr. Pavy had sought to ascertain the cause of its absence. In investigating the nature of the substance called by Bernard "glucogenic", with regard to its relations; and this investigation led to ascertaining an important fact.

The glucogenic substance is very easily obtained by making a decoction of liver and evaporating: the substance appears as a scum on the surface, which is removed as it is formed. To purify it, it is mixed with distilled water, and precipitated by alcohol. The substance is not acted on by potash, even at a boiling temperature. If a liver is boiled with a strong solution of potash, the glucogenic substance is dissolved; it is then precipitated by spirit, and freed by washing from a small quantity of potash which adheres to it.

In composition, it is allied to starch and dextrine; its chemical formula is C^{12} H^{12} O^{12}. Like dextrine, it presents a wine-red colour on the addition of iodine.

Its most important property is its ready convertibility into sugar, when in contact with albuminous materials at a somewhat elevated temperature. Saliva acts most energetically on it: if a portion be mixed with human saliva, and tested with Barreswil's solution, the red suboxide of copper is thrown down. It is the albumen contained in the liver which converts the glucogenic substance into sugar after death. Blood has the same effect.

If a little alkali be added to the glucogenic substance, its transformation into sugar is prevented: and the observation of this fact gave Dr. Pavy the hint for obtaining the liver as it existed during life, before *post-mortem* changes had appeared. Observing that alkalies prevent the transformation, he thought that, if the sugar were formed after death, no sugar ought to be found in the liver if the organ were injected during life with a solution of potash. This experiment he performed on a dog, and found the result he anticipated. To obviate the objection that the absence of sugar might depend on the state of health of the animal, he repeated the experiment, causing a part of the liver to be firmly held by an assistant, so that the injected fluid could not enter it. On testing the two portions, that into which the liquor potassæ had been injected yielded no sugar: while the other part gave abundant evidence of its presence. Acids, as citric acid, also prevent the formation of sugar.

But there is a still better method of performing the experiment. The glucogenic substance requires a certain temperature for its transformation into sugar; and, therefore, to remove any objections which might be raised on the ground of the chemical action of the substance employed, a portion of liver, removed instantly after death, was placed in a freezing mixture. This part gave no indication of sugar: while the other portion, which had not been frozen, yielded it as usual. The experiment was repeated on a rabbit which had been fed on oats, with the same result. When the frozen liver is thawed, it yields sugar after a time—three days for instance—shewing that the effect of the cold has merely been to arrest the change.

As a substitute for the term glucogenic subtsance, which had been objected to, the name "hepatine" has been suggested. This, however, would imply that the substance was peculiar to the liver; whereas it, or at least a material closely allied to it, is formed in the muscles, lungs, and placenta. The term "amyloid," or starch-like substance, implies no theory, and is perhaps the best term to be used at present.

In some of the invertebrata also, this amyloid substance is formed. In the common mussel, for instance, the mantle is strongly charged with it: and in this part also the microscope

discovers fat particles and albumen. The mantle, however, does not yield sugar so readily as the liver of the animal; perhaps because the ferment, through which the change is brought about, is less active. The gasteropods, as the oyster and mussel, afford a very convenient means of observing the condition of the liver during life. Articulated animals, as crabs and crayfish, also yield sugar.

In making experiments on the liver of the frog, Bernard noticed that when the body was cold (*i.e.*, at the natural temperature of the animal), the liver was free from sugar; but that if the animal had been exposed to an elevated temperature, sugar was formed. He thought that the formation of sugar was merely increased by an increase of temperature. Dr. Pavy at first thought this explanation correct, and that the elevation of temperature would induce a diabetic state in frogs: but, on allowing some frogs to cool which had been kept in a warm place, he found that their livers yielded no sugar. The explanation was now easy. When the frog is in its natural cold state, the change does not set in early, and it is possible for some time after death to obtain the liver as it existed during life: but when the frog is raised to a temperature of about 95°, it is placed in the state of a warm-blooded animal, and the change occurs rapidly.

Bernard divided the spinal cord just below the phrenic nerves, and placed the animal in a cold place. No sugar was formed at first: but in a few hours, it was detected. He explained this by supposing that the division of the cord had deprived the liver of some power, which it only slowly regained. But, if the spinal cord be divided, and the animal be placed in a warm room, and not on the cold floor of the laboratory, sugar will be at once found, as in warm-blooded animals.

It is clear, then, that the liver does not during life perform the function of forming sugar, because—1, the blood which passes from the liver to the heart is not saccharine during life; and 2, the tissue of the liver during life does not contain sugar.

The amyloid substance appears to be formed from sugar. If an animal be fed on a diet abounding in starch or sugar, the liver increases in weight, and the proportion of the amyloid substance is greatly augmented. The livers of some dogs fed on tripe bore the proportion of half an ounce to each pound in weight of the animal. In other dogs, fed exclusively on bread and barley-meal, the liver was in the proportion of rather more than an ounce to the pound. Other dogs were fed on tripe and cane-sugar; and in these the liver weighed nearly an ounce to each pound of the animal's weight. In both the latter cases, the quantity of amyloid substance was remarkably increased. The results are shown in the following table:—

	Weight of liver in proportion to lb. of animal.	Amyloid substance. Per cent.
Dog fed on animal food . .	½ oz.	6.97
„ on vegetable food, above	1 oz.	17.23
„ on tripe and sugar, nearly	1 oz.	14.50

Of two rabbits, apparently from the same litter, and as nearly as possible in the same condition, one was kept without food; while into the stomach of the other an ounce of starch and an ounce of cane-sugar was injected on each of three days. The liver of the rabbit which had fasted weighed an ounce, and yielded 1.4 per cent. of amyloid substance; the liver of the animal which had been fed with starch and sugar weighed two ounces and three-eighths, and yielded 16.9 per cent. of amyloid substance.

Other two rabbits, apparently of the same litter, were fed with starch and grape-sugar; and during three days they were treated in the manner just described. The liver of the animal which had fasted weighed one ounce and two-fifths, and yielded 1.3 per cent. of amyloid substance; the liver of the other weighed two ounces and four-fifths, and contained 15.4 per cent of amyloid material.

The effect of feeding a rabbit with starchy food is to render the liver much lighter in colour, and more pulpy and easily broken up, than in the normal state.

[At the end of the lecture, Dr. Pavy killed a rabbit by dividing the upper part of the spinal cord. He then immediately removed a portion of the liver, and threw it into a mixture of ice and salt. When it was frozen, he pounded a portion, and boiled it a few minutes in distilled water. On applying Barreswil's solution to the decoction, not the slightest trace of sugar could be detected. A portion of the liver which had not been frozen was treated in the same way; the test gave abundant evidence of the presence of sugar.]

Inventions and Appliances
IN MEDICINE AND SURGERY.

UTERINE TRUSS: A NEW INSTRUMENT FOR TREATING PROLAPSUS UTERI.

At the quarterly meeting of the Midland Branch of the Provincial Medical Association, held at Derby, on December 4th, 1851, Mr. John Jones of Derby read a paper on prolapsus uteri, and exhibited, for the inspection of the meeting, a new instrument for its treatment. Since that period, the instrument has been greatly improved; and in its present state he finds that it very completely fulfils the purposes for which it is intended, as expressed in the following quotation from the paper referred to:—

"The uterine truss supplies a most important desideratum, by entirely superseding the use of the pessary—an instrument which has hitherto been considered by the profession generally, indispensably necessary in the treatment of prolapsus uteri. It fulfils the following most important indications; viz.: To strengthen those parts which, by their relaxation, have allowed the descent of the uterus; and to remove the pressure on the uterus produced by the superincumbent weight of the abdominal viscera."

As the uterine truss unites strength and lightness with elasticity, it is easy to wear, and efficient in its application. It is highly beneficial under the following circumstances:—1. Delicate females, either married or single, are subject, when walking or standing, to uterine pains, accompanied with a variety of nervous or hysterical symptoms. These are greatly relieved by the truss, which is an admirable auxiliary to medical treatment. 2. When the descent of the womb is considerable, but not amounting to protrusion externally, the inconvenience and pain are proportionably great. In such cases, the truss relieves the pain, and renders walking or standing, which previously were attended with much inconvenience, easy and comfortable. 3. When the disease is so far advanced as to constitute complete prolapsus, the uterus protruding externally, the truss is of inestimable value, as in such cases the pessary often cannot be applied efficiently; whereas the support given by the truss affords great and permanent relief.

In many instances, the truss has apparently produced a permanent cure; as in several very bad cases, and others less severe, Mr. Jones has found that after wearing it for some time, it has been discontinued without inconvenience or recurrence of the disease.

Description. It consists of two parts: an abdominal belt with two spring pads, and a perinæal bandage with movable pad.

Abdominal Belt. This is made of strong holland or jean. Two pads are placed in front, each pad formed of two circular tin plates; the outer rather larger than the inner one. They are made to act on each other by an interposed spiral spring, padded with horse-hair, and covered with wash-leather. They are united to each other by interposed elastic web, an inch and a half broad; on each side of the pads is let in an elastic web, about four inches broad. When worn, the belt is fastened with two straps and buckles: on its upper edge are loops, placed at short distances, for the passage of a strap, which buckles round the waist.

Perinæal Bandage. This consists of an anterior and posterior portion, united to each other by interposed elastic web, three inches long and two broad. The anterior portion, about four inches broad, has two rows of metallic holes, corresponding with hoops on the abdominal belt; on the inner side is placed a sort of pocket, made of gutta percha tissue, which contains a movable pad, to which is attached a strap with two button-holes, one above the other, corresponding with a button, so as to admit of lengthening or shortening of the pad.

LETTERS AND COMMUNICATIONS.

Letters or communications for the Journal should be addressed to Dr. Wynter, Coleherne Court, Old Brompton, S.W.

Letters regarding the business department of the Journal, and corrected proofs, should be sent to 37, Great Queen Street, Lincoln's Inn Fields, W.C.

British Medical Journal.

SATURDAY, DECEMBER 10th, 1859.

IMPERFECT VACCINATION A CAUSE OF MORTALITY FROM SMALL-POX.

We endeavoured last week to show that the burthen of mortality in the present, as in every epidemic of small-pox in this country, has fallen upon children under puberty, who were none of them, or scarcely any of them, vaccinated in our sense of that term; that is to say, who were not protected by having passed through the genuine vaccine disease. The great majority of these, without doubt, had never even been presented for vaccination at all; but some had been submitted to the operation after the fatal infection had been received into the system; and, in others, the insertion of lymph had taken no effect, or been followed by a spurious result. This last class of cases is spoken of by the law as "unsuccessfully vaccinated". Many, no doubt, of the adults who perish by small-pox belong likewise to this class, and some also to a class in which the vesicles produced, though they might have had the vaccine character and course, were yet poorly developed, and insufficient in number to yield the fullest amount of protection which vaccination is capable of affording. These cases, in the eye of the law, are "successfully vaccinated"; but, in the eye of the experienced practitioner of vaccination, they are "insufficiently vaccinated".

In the hands of the most expert operator, vaccination will sometimes fail to produce results; but the more expert the operator, and the more careful he is in the selection of lymph, the less frequently will this occur. Mr. Marson says that, with good lymph and the observance of all proper precautions, an expert vaccinator should not fail oftener than once in one hundred and fifty times. Other experienced vaccinators state that failure is comparatively rare; and all agree that there is no method so certain of success as that in which the lymph is transferred immediately, in its liquid state, from arm to arm. Now, it is of the utmost importance that the operation should fail as seldom as possible; for oftentimes a child in whom it has once failed is never brought back, the mother being careless or indifferent, or ignorantly supposing that all has been done that is required for the child's safety, or being unwilling to have it cut again, or content with having complied with the law. The consequence is, that the child remains unprotected. From the communication of the able medical officer of the City of London in the *Times* of November 19th, it appears that in ninety-three cases of small-pox, into the particulars of which he had inquired, there were eight in whom the operation of vaccination had been performed without effect. It is, therefore, of the utmost consequence that the law, which now compels the vaccination of all, should take the most ample security for the skill of the vaccinators employed, and for the sufficiency of the vaccination arrangements to provide the people with the best vaccination—that is to say, the vaccination from arm to arm. But so far is this from being the case, that we may state, on the best authority, that many vaccinators think they do well if they only fail once in five or six times; and we have heard it alleged as very fair vaccination for four out of six to take effect; while, even in a large city like London, an enormous quantity of vaccination is carried on with dried lymph. If the insertion of lymph, instead of producing no effect, have given rise to a spurious vesicle, there is greater risk than in the former case that the child may not be taken to the vaccinator again; for the parent, satisfied with the local inflammation developed, is very apt to feel assured of the protection of the child. This default of parents in not uniformly taking their children for inspection leads to the greatest mischief, and the law in this respect ought to be very stringently enforced. But it is also of the highest consequence that everything that can possibly give rise to such results should be avoided, and that every requisite precaution against them should be taken, both in regard to the lymph employed and the state of health of the child to be vaccinated; and that the vaccinators should be most intimately acquainted with the characters of the genuine and of the spurious vesicle. Yet we are bound to state that there are either some vaccinators who understand very little of this difference, or that they must have been very lax in their way of granting certificates; for we are acquainted with the existence of cases in which certificates of success had been given, but in which the vesicles, submitted to persons well practised in vaccination, were pronounced spurious; and with other cases, in which death occurred in young children whose successful vaccination had been medically certified, but in whom it was clearly made out, on subsequent inquiry, that only a spurious result had ensued on the operation.

In that class of cases to which we have referred as insufficiently vaccinated, the vesicles may have had the genuine character, and gone through a course more or less regular, but have been small and poorly developed, or not exceeded one or two in number. The different degree of immunity enjoyed by persons so vaccinated, from those in whom the vesicles had been more perfect, or the number more considerable, is shown in the records of the Small-Pox Hospital, so admirably presented by Mr. Marson; from which it appears that, while persons so vaccinated as to have good marks, if they were subsequently attacked by small-pox, died at the rate of 3 per cent., those who had but indifferent marks died at the rate of nearly 10 (9.77) per cent: and again, as regards number of marks, that while there died with one or two cicatrices 6.21 per cent., the deaths in those who had three, four, or more cicatrices were but 1.30 per cent. Indeed, of 620 patients who had four cicatrices, admitted to the Small-Pox Hospital in the course of twenty-one years, there have died of small-pox only three, or less than the half of one per cent.

With such facts before us, we do not feel called upon to enter on the question of a decline in the protective powers of vaccination. Let this be but rightly and properly administered to all, and such mortality as we are now deploring will be matter of history. In the course of sixteen years recorded in Mr. Marson's paper, including the great epidemic years 1838, 1840, 1841, 1844, 1848, and 1851, there died altogether in the

Small-Pox Hospital only thirteen persons, who had been vaccinated in the best way, that is to say, who had more than two vaccine cicatrices, and six out of these thirteen died, not from the severity of the small-pox itself, but from superadded disease. We are appalled, therefore, at the statement, lately made by Dr. Letheby, that of thirty-four fatal cases investigated by him, twenty-one had been vaccinated. Allowing that some at least of the eight cases above referred to, in which it was said that the vaccination had been unsuccessful, and that others, in which vaccination had not been attempted till after the small-pox infection had been received into the system, are included in this number, it is yet alarming to think that so many should have been relying on a false security, and calls on us seriously to consider what it is that is amiss in our vaccination system, and how we may best and more speedily put our house in order.

We have carried these observations to such length, that we must state in very brief terms what appear to us some of the most prominent defects of the present system.

First, there is no authorised and systematic teaching of vaccination; no public vaccinating stations appointed at which pupils may attend and be instructed in the characters of the genuine vesicle and the best mode of vaccinating; no requirements on the part of the state, or of any of the medical examining bodies, that they have been so instructed. Heavily are we paying now for our neglect of the warning of Jenner, delivered upwards of fifty years ago. "I expect,"—such are his memorable words in 1804—"that cases of this sort (failure of protection) will flow in upon me in no inconsiderable numbers; and for this plain reason, a great number, perhaps the majority, of those who inoculate are not sufficiently acquainted with the nature of the disease, to enable them to discriminate with due accuracy between the perfect and imperfect pustule. This is a lesson not very difficult to learn, but unless it is learnt, to inoculate the cow-pox is folly and presumption!"

Secondly, the important work of vaccination—all-important in its consequences—is often delegated to unqualified assistants, pupil-assistants, sometimes mere boys: nay, even that druggists are employed in some instances systematically by vaccinators to act as their deputies, receiving a certain portion of the fee for their remuneration, the certificate of success being granted upon their representation,—a fact for which we can vouch.

Thirdly, the arrangements for public vaccination are in many instances very defective. The great desideratum is vaccination continuously from arm to arm, with an ample number of cases from which to select lymph on each vaccinating day. A vaccinator who has five hundred vaccinations a year, operating on one day in each week, will have no difficulty in keeping up his supply in this way. Of course, in country districts and small towns, this is not attainable; and here, we are aware, special arrangements are required. But in all large towns, and above all in this metropolis, nothing could be easier of accomplishment. Yet such is the absurd subdivision, that there are very few indeed of the public vaccinators of London in this position. In some parishes, with populations of near a hundred thousand each, the vaccination is parcelled out among such a number of vaccinators, that there is scarcely a single one who can maintain his correct arm vaccinations: and in other parishes where this extreme subdivision does not prevail, but where each vaccinator has a district which supplies him with the number of cases requisite to accomplish this if he confined his vaccinations to one day in the week, all this advantage is thrown away by the absurd plan of offering daily vaccination. Thus vaccinators with five and six hundred cases a year are vaccinating constantly with dry lymph!

To some of these crying evils we rejoice to find that a remedy is about to be applied. Since the above was written, the Regulations issued by the Privy Council under the Public Health Act, which we print at page 1009, as well as a memorandum of arrangements for the public teaching of vaccination, the insertion of which we are obliged to defer to next number, have been communicated to us. We earnestly request our readers' attention to them. They appear to us to deal very comprehensively with some of the defects which we have pointed out, and we trust they are but a prelude to other steps in which not only the remaining evils we have spoken of, but others to which space has not permitted us to allude, will be effectually and uncompromisingly dealt with.

THE WEEK.

It is not our province to discuss the political advantages which must arise to this country from the deliberate and unanimous manner in which the population are arming. It certainly is an extraordinary thing to find our old municipal halls all over the country ringing at night to the heels of manœuvring companies of riflemen, and to find the youth of the country regaling themselves, after the fatigues of the day, in learning, *by gaslight*, soldiers' drill; and we trust our neighbours across the Channel will understand the hint. Our purpose, however, is not to meddle with the uniform and martial spirit of the country, but to regard it in a sanitary point of view. There can be no doubt that a large proportion of the adult male population of our towns live, on the whole, a sedentary life. The shop, the office, and the chamber, are the scene of action of the majority of townsmen. Their occupations are sedentary, and their diseases are those of men who are deprived of a due amount of fresh air, and of a systematic exercise of their limbs. Can it be doubted that this exercise will be found in the rifleman's drill? A march to Wormwood Scrubs and back, or a skirmishing on Hampstead Heath, will be an excellent diversion for the law student or the shopman, and an antidote to dyspepsia such as few medicines could equal. As there is every sign that these rifle corps will become fixed institutions of the country, we cannot help thinking that our troublesome neighbour across the Channel has done the public health good service, inasmuch as his restlessness will result in giving just that amount of physical education which townsmen need, and which we do not believe they would have submitted to under any other stimulus. If we notice in future a marked improvement in the Registrar's report of the health of London and our other large towns, we shall, without doubt, have to thank our "fair enemy France" for it.

A brief but highly interesting course of lectures has just been given at the Medical Society of London. Some years ago, the doctrine was promulgated by the celebrated Parisian physiologist, M. Claude Bernard, that, in the healthy state, one of the functions of the liver is to form sugar, which is then

sent to the lungs and consumed in the respiratory process: and, according to M. Bernard, the occurrence of diabetes was to be explained rather by supposing an excessive formation of sugar in the liver, or by a defect in the eliminative power of the lungs. His deductions, however, were founded on examinations of the liver and blood of animals after death; and thus, it seems, he has been led into physiological error of the greatest importance. Dr. Pavy of Guy's Hospital, who has just delivered the Lettsomian lectures at the Medical Society, has, in investigating the subject, met with facts which have led him to the conclusion that the occurrence of sugar in the healthy liver is entirely the result of the *post mortem* transformation of an amyloid substance which exists in the organ; while the presence of sugar in diabetes results from the liver being in some way deprived of its power of resisting the saccharine transformation. The arguments adduced by Dr. Pavy, and his experiments, which bear the mark of great care, seem thoroughly to establish his point. We are now evidently much more advanced on the right road towards understanding the pathology of diabetes than we were a few years ago: nevertheless, much remains to be done, and it is to be hoped that Dr. Pavy and other physiologists—especially those who have also the opportunities afforded by hospital appointments—will continue to work at the subject as its importance deserves and as its difficulty requires.

At a recent meeting of the Branch Medical Council for Scotland, a correspondence was read which had taken place between the Branch Registrar, Dr. Robertson, and the Registrar of Births, Deaths, and Marriages in Scotland, and his Secretary. On August 11th, Dr. Robertson called the attention of the Registrar of Births, etc., to a certificate which had been filled up by a person styling himself a "medical botanist", but who was not registered as a qualified practitioner; and he argued that such certificate was rendered invalid by Clause xxxvii of the Medical Act. To this the reply was, that the Registrar of Births and Deaths was of opinion that he was bound to receive all certificates in the form of the one referred to, that might be transmitted to him by persons professing to be engaged in the practice of medicine. This interpretation was persisted in; and, on September 22nd, Drs. Alexander and Andrew Wood, by direction of the Branch Council, addressed a letter in which they refuted the objections raised against the enforcement of the provisions of the Medical Act. The reply to this was an offer to submit the matter to the Home Secretary; and we hear that his decision is to the effect that certificates of death cannot properly be received unless they are signed by a person duly registered under the Medical Act.

An action was tried a few days ago, at the Brompton County Court, which afforded an instance of the obstacles often placed in the way of medical men in obtaining the settlement of disputed accounts. The plaintiff, Dr. Ogier Ward, formerly residing at Kensington, but now near Windsor, had to leave his patients, and travel to Brompton to recover a bill of £7:19 from a wealthy tradesman residing at Kensington, named Cooper, who adopted the usual defence to medical men's claims, "overcharge, and medicines charged for not supplied". Dr. Ward stated that, in January of this year, five children belonging to the defendant were attacked with scarlet fever, and from that time up to March he paid unremitting attention to the patients. In the interim, three of his patients died, and two recovered. He had no hesitation in rejecting an offer of of defendant to pay five pounds; firstly, upon principle, and a duty he owed to the profession at large; and secondly, the charges were so moderate, under the circumstances, that if he made a deduction, he should be a positive loser for drugs. The defendant said, that part of the medicine supplied was charged for the three children after they had died; and he considered the bill a most unreasonable one, and that five pounds would be ample payment. Dr. Ward contended that the medicine alluded to was not intended for the three dead children, but for the two that survived. The defendant might as easily have urged that his attendance was for the deceased after they were buried. The judge thought the defendant had so recently met with a calamity, that Dr. Ward should make some allowance; and directed a short adjournment, which ended in the plaintiff's positive refusal to come to any other arrangement than give two months time to pay the bill. Ordinary costs only were allowed.

Association Intelligence.

NOTE FROM THE TREASURER.

The Treasurer acknowledges the receipt of fifteen pounds from the Bath and Bristol Branch of the Association, towards the liquidation of the debt due to the Treasurer; also the sum of one pound from Dr. Birch of Piccadilly; ten shillings in payment of the call made in 1856, and ten shillings for the call agreed to at the Liverpool meeting.

Worcester, December 8th, 1859.

BATH AND BRISTOL BRANCH: ORDINARY MEETING.

The ordinary meeting was held at the White Lion Hotel, on Thursday, December 1st, at 6¼ P.M. J. G. Davey, M.D., President, in the chair. Members present:—C. S. Barter, Esq. (Bath); J. S. Bartrum, Esq. (Bath); John Beddoe, M.D. (Clifton); William Budd, M.D. (Clifton); S. Bryant, Esq. (Bristol); C. E. Bernard, M.D. (Weston-super-Mare); W. T. Church, Esq. (Bath); Henry Clark, Esq. (Bristol); W. M. Clarke, Esq. (Clifton); G. C. Corbould, Esq. (Bristol); Edw. Crossman, Esq. (Hambrook); Charles Collins, Esq. (Chew Magna); Wm. Davies, M.D. (Bath); E. L. Fox, M.D. (Bristol); R. S. Fowler, Esq. (Bath); H. E. Fripp, M.D. (Clifton); J. Godfrey, Esq. (Bristol); Wm. Granville, Esq. (Bristol); W. B. Herapath, M.D. (Bristol); Wm. Henderson, M.D. (Clifton); H. A. Hore, Esq. (Bristol); W. Hutchins, Esq. (Keynsham); J. Lawrence, Esq. (Bath); C. Leonard, Esq. (Bristol); E. S. Mayor, Esq. (Bristol); J. S. Melford, Esq. (Clifton); E. Norman, Esq. (Bath); A. Prichard, Esq. (Clifton); J. N. Spender, Esq. (Bath); R. M. Stone, Esq. (Bath); J. G. Swayne, M.D. (Clifton); S. H. Swayne, Esq. (Clifton); George Terry, Esq. (Wells); G. Vicary, Esq. (Warminster); M. Willett, Esq. (Bristol); and as visitors, Dr. Whytehead, of York, and Messrs. Talbot, Wilson, jun., and Quarrell.

The minutes of the last meeting were read and confirmed.

NEW MEMBERS.

David Michael, Esq., of Bath, and Dr. Bernard, of Weston super Mare, were elected members of the Branch.

COMMUNICATIONS.

1. Case of Salivary Calculus. By W. Budd, M.D.

Dr. Budd also exhibited a series of Photographs, illustrating the effects of Typhoid Fever upon the Intestines.

2. *Diphtheria.* Dr. Davies detailed the communications he had received on the subject of diphtheria, with remarks upon them.

3. Case of Injury of the Head, attended with rupture of the Membrana Tympani. By W. M. Clarke, Esq.

The papers will be published in the Journal.

MEDICAL REGISTRATION.

NOTICE.

The Medical Registrar presents his compliments to the Editor of the British Medical Journal, and would be much obliged if attention could be drawn to an advertisement sent herewith, in order that qualified persons who are still unregistered, those especially who have obtained their qualifications in the course of the present year, may not lose their opportunity of appearing in the *General Register* for 1860.

Medical Registration Office, 32, Soho Square, London, W.,
November 21st, 1859.

Reports of Societies.

MEDICAL SOCIETY OF LONDON.

Monday, November 28th, 1859.

John Hilton, Esq., F.R.S., President, in the Chair.

ON VESICO-VAGINAL FISTULA; ILLUSTRATING A NEW MODE OF OPERATION. BY I. BAKER BROWN, ESQ.

Mr. Brown commenced his paper by stating that he had already recorded twenty cases of perfect cure, and then gave the particulars of seven more cases. Case xxi was of two years duration; two operations were performed, and a cure was effected. Case xxii was of six months duration; four operations were followed by cure. Case xxiii was of thirteen years duration; three operations were performed, with a successful result. In Case xxiv, of three years duration, an operation was followed by cure. Case xxv was of six years duration; the operation was followed by cure. In Case xxvi, of twenty years duration, death followed the operation. Case xxvii was of three years duration; one operation was followed by cure.

Mr. Brown then proceeded to make some remarks.

1. *Position of the Patient during the Operation.* Three positions had been recommended; viz., on the hands and knees, by Dr. Bozeman; the semiprone position, by Dr. Simms; and the lithotomy position, by Mr. Brown himself. He (Mr. Brown) still considered this last position as the best, both for the patient whilst under the influence of chloroform, and for the surgeon, who can sit down before the patient in an easy position. Occasionally, however, cases occur where, from peculiarity in the position of the lesion or of the female organs themselves, it may be advisable not to administer chloroform; and where the opening can be better seen and reached on the hands and knees than in the lithotomy position.

2. *Modes of Operating.* Mr. Brown mentioned four modes: simple suture, as recommended by Hayward; metallic sutures, as practised by Gossett in 1834, and more fully placed before the profession by Simms of New York; metallic sutures, guarded by clamp, as practised by Simms, or by button, as recommended and practised by Bozeman; and the plan recommended by Mr. Brown himself, viz, metallic sutures, with a separate bar-clamp to each. The sutures might be either silver wire, or galvanised iron wire as prepared by Cocker Brothers of Sheffield. In this plan, the patient being placed in the lithotomy position, the edges of the fistula are pared with three knives of different shapes. [These knives were designed and publicly used by Mr. Brown himself many years before Dr. Bozeman came to England, at which time it appeared that Dr. Bozeman, feeling the necessity for such instruments, had also designed them.] The edges being pared, a needle is passed, as practised by Dr. Simpson; and through it either a silver or galvanised iron wire suture. As many sutures as may be necessary having been passed, the two ends of the first suture are passed through the eyelet-hole of the simple bar-clamp, which is slightly curved, and has a perforated nipple projecting from its back. The ends of the wire are then held with the left hand; and, the nipple of the clamp being seized with a pair of long forceps, it is pressed back until the edges of the fistula are seen to be in perfect contact. The nipple is then firmly squeezed. This has the effect of partially straightening the clamp, and of securing the wires. Each suture is treated in the same way until all are closed. The advantages of this plan are—*a*. Its celerity, as compared with others; *b*. The certainty that the edges are in contact all along the fistula; *c*. However irregular the opening may be, its tortuosity can be followed without the slightest difficulty; *d*. Should the opening be very large, the edges are kept perfectly together, whilst the vagina is not stretched out as it would be under a large button. Each suture is also well guarded by the clamp; and there is no trouble in removing them. The anterior side of each suture is cut under the clamp; and, this being seized with a pair of forceps, and slight traction made upon it, the wire is easily withdrawn. By this mode, the duration of the operation is reduced to a quarter of an hour in the slight cases, and to three-quarters of an hour in the worst cases, instead of two or three hours, or even a much longer time.

3. *Causes of the Lesion.* In nearly every case, it arises from long protracted labour. The head pressing upon the bladder and soft parts generally, produces that state of parts which leads to the fistulous opening being established.

4. *Causes of Failure after the Operation.* Failure may arise from not carefully denuding the edges; from not introducing the needle deeply enough through the tissues; from want of care in bringing together the edges of the fistula; from neglect of position of the patient after operation (this should always be upon the side); from neglecting to keep the bladder empty, either by the catheter being left in, or by its frequent introduction. Occasionally, the general health may be so much impaired as to predispose the patient to pyæmia, or to prevent healthy plastic matter from being thrown out sufficiently early to ensure union. The general health should therefore be attended to before operation. Another not unfrequent cause of failure arises from the condition of the parts induced by frequent operations, especially cauterisation: the parts become almost cartilaginous, and unable to throw out plastic matter.

5. *After Treatment.* Mr. Brown considers that on the free use of opium and generous diet, with strict attention to the bladder, depends the success of the operation, however well performed in the first instance.

Dr. Hall Davis had been much gratified at the introduction of the operation for vesico-vaginal fistula, and at the success which had attended it. The objection to Bozeman's operation, notwithstanding its simplicity and success, was the time which it occupied. He had seen an operation of this kind requiring upwards of one hour. Shortening of the time occupied was desirable, especially as it diminished risk. He had been surprised at the extreme facility with which the clamps could be applied in Mr. Brown's operation. As to the position, he had seen the operation done both on the hands and knees and in the lithotomy position; and he thought that preference was obviously to be given to the latter; but the position on the hands and knees was required in some rare cases. He believed that the lesion was in most cases caused by the long continued pressure of the head of the child in cases of impaction.

Mr. Maunder inquired as to the success attending the operation in cases where the anterior lip of the cervix uteri had been implicated in the operation. Was any impediment produced in subsequent labours? If so, should premature labour be induced, to obviate the risk of bringing on the fistula again?

Dr. Rogers was in favour of the button; but if the clamp were proved better, it would be a benefit. He knew two cases of pregnancy after successful operation for vesico-vaginal fistula. In one case, the os uteri appeared obliterated; but the whole parts opened out, and the labour proceeded successfully. In the other case, also, there was no injury from labour.

Mr. Bryant said that, in a case on which he had operated some months ago, he found that, though the lithotomy position was most convenient for the patient, it was impossible to get a view of the fistula. He therefore placed the patient in the semireclined position. The fistula was quite in the upper part of the vagina. He attempted to operate with a needle formed on the plan described by Mr. Brown. But there was difficulty in using it; it could be passed through the lower lip, but not the upper; and he found the common curved needle on a handle to answer every purpose. The parts were readily held together with twisted wire sutures, without clamps. The patient was a poor emaciated woman, with a fistula an inch and a half long: two-thirds of it had united, and another operation would probably be performed. He thought well of the clamps exhibited by Mr. Brown, and would probably employ them in his next operation. Was there any means of bringing a fistula in the upper part of the vagina into view during the operation?

Dr. Routh said that, in cases where there was a large opening and the edges were not close together, union would not occur. In these cases, there was a plan of operation by which wires were passed on each side of the opening, and incisions were made in the vagina, which was dilated with tents. It was found then that the edges would be brought together with the greatest ease.

Dr. Gibb said, that some cases were better operated on on the hands and knees—a position which was often distressing to the patient. He suggested that some kind of chair or support might be contrived to hold up the body of the patient. The contrast of the operation in the present day and ten or twelve years ago, as to success, was very remarkable. He had lately seen a recent case of vesico-vaginal fistula treated in St. Bartholomew's Hospital. A catheter was kept constantly in the bladder; and the edges of the fistula were touched with ammonia; and the fistula completely closed.

Mr. Brown was aware of five or six cases in which labour had occurred after successful operation for vesico-vaginal fistula; nor would the return of the lesion be expected in a normal pelvis, unless the head were allowed to press too long. In one case, where there was a deformed pelvis, he had advised the induction of premature labour, which was performed with success at seven months and a half. It was easy, by means of forceps held by an assistant, to bring the parts completely into view during the operation.

HARVEIAN SOCIETY OF LONDON.

December 1st, 1859.

Edward Hart Vinen, M.D., President, in the Chair.

THE PATHOLOGY AND TREATMENT OF IDIOPATHIC PERIPHERAL NEURALGIA. BY H. LOBB, ESQ.

Mr. Lobb commenced by dividing neuralgia into central, peripheral, and reflected. Of the central, arising from disease of the brain or spinal cord, he did not speak. The second class was divided into idiopathic, traumatic, and neuromatous: the third, or reflected, he proposed considering in a future paper. Idiopathic peripheral neuralgia was described as a stabbing darting pain, referred to the course of a nerve, shooting down the nerve like lightning, taking place suddenly, lasting but a moment, and repeated at intervals; the pain is so acute as to be unendurable if it were continuous. The part or limb affected by this form of neuralgia is colder, and the skin supplied by the neuralgic nerve is more or less numb, not tender to the touch, the patient liking to be rubbed, frequently grasping the part with the hands, and pressing it. If the neuralgia has lasted any time, there is more or less paralysis in the muscles, supplied by the accompanying motor nerve. The author then gave his views upon the generation and distribution of nerve-force, from the capillary circulation. He described a sentient nerve as a conductor to the brain of sensations, taking place at the periphery. Neuralgia is not therefore a hyperæsthesia of its healthy function. During health, a nerve has no sensation proper to itself: if it is shrunk, or torn, or cut, the sensation is referred to the parts to which it is distributed; but in this form of neuralgia it is the nerve itself to which the pain is referred as darting up and down its course. Mr. Lobb likened a sentient nerve to an iron conducting wire of a galvanic battery; which, if of a certain uniform diameter, conducts a given quantity of galvanism without being perceptibly affected by its passage; but if a portion of the wire be much finer than the rest, it becomes red hot, being unable to conduct the whole of the galvanism, the remaining portion correlating into heat. So in a nerve, if by malnutrition it is unable to conduct normal sensations to the brain, the nerve-current, by affecting the polarity of the nerve itself, gives the idea of pain in that portion of the trunk of the nerve, its peripheric terminations at the same time being numbed. The author considered the indications for treatment, therefore, to be increased, and healthy circulation, arterial and nervous. After enumerating the usual methods of treatment, he considered the only agent capable of carrying out these indications, to be the continuous galvanic current; and he recommended as the only apparatus that can be worn upon the surface, and capable of generating a sustained current, the Pulvermacher chain, producing a continuous current of galvanic electricity in one uniform direction, mild, yet sufficiently energetic for medical purposes. Mr. Lobb then described the method of applying the chain, and exhibited some experiments with its aid, as the decomposition of water, contractions of muscles, etc. In the treatment of idiopathic peripheral neuralgia, he looked upon the Pulvermacher chain as a specific. Immediately upon adapting the excited chain to the part, a genial and peculiar glow is felt, not mere warmth, but a sense of vitality in the part, the patient is aware of a life-giving agent, and immediately says that he is relieved, the neuralgia disappears, and sensitiveness of the surface returns. The paper concluded with several cases in which the continuous galvanic current afforded rapid and permanent relief.

Editor's Letter Box.

PUBLIC VACCINATION.

Letter from Thomas Walker, M.D.

Sir,—Regarding vaccination as at present on its trial, and before a most incompetent tribunal, one which is capable of being very easily misled, as well by falsification of evidence as by false reasoning, imperfect observation, and by interested or party motives on the part of those who have brought the subject before the public, which forms the incompetent tribunal to which I refer,—I think it may be well to discuss the subject in our own special journals, rather than to seek the general notoriety of a letter to any non-professional periodical. Medical correspondents of the *Times* have excited in the public mind some misgivings on the subject of the spread of small-pox, and as to the protection from that dangerous and loathsome malady afforded by vaccination. If this misgiving is founded upon the proved extension of small-pox among persons previously and properly vaccinated, and not merely upon the report of an increased number of deaths from small-pox by the registrars, then, and only then, is there cause for the doubts and fears which these gentlemen have endeavoured to excite. My doubt is, I own, as to the soundness of their views, the correctness of their observation, and the good taste of their proceedings in addressing the public through the columns of a newspaper.

I have no doubt, and I never have had any doubt, that occasionally the protection given by vaccination is incomplete; but that there is any evidence of a diminution in the proportional number of protected cases, is by no means proved; and, as far as my own observation goes, any such suspicion rests upon very imperfect evidence.

I do not find cases of small-pox occurring more frequently during the last five years, within the sphere of my own observation, than during any similar period of time during the last forty years.

I do not find any perceptible deterioration in the virus used, as indicated by any difficulty in its producing the genuine vaccine vesicle, going through its regular stages, regular as to the period of its progress, and perfectly similar to that which nearly forty years ago I amused myself by sketching, taking a fresh sketch for each of six days after the third day, of the same arm, as a representation of the progress of a genuine vaccine vesicle; and, as I have already said, I have no reason to regard the later vaccinations as less protective than those performed many years since.

On the other hand, having very often performed revaccination in previously vaccinated subjects, as well as having frequently vaccinated persons who had previously had small-pox either by inoculation or by infection, I have only in one instance, that I can recollect, seen the operation followed by anything that could or ought to be by any means mistaken for a genuine vaccine vesicle. In the one case to which I allude, I believe that the influence or the previous vaccination was lost, or possibly, from some circumstance, had never existed. The case was one out of a family of seven children, of whom I vaccinated six, in consequence of the eldest son, who was then at Eton, having been attacked by small-pox. He, like the rest, had been vaccinated when an infant, and, I may add, soon recovered from his attack of small-pox, modified as it was by his previous vaccination.

Those who are so anxious to bring vaccination into disrepute with the public, must forget, or would make it generally forgotten, that, imperfect as the protection afforded by vaccination may be, still it far surpasses any protection we have it in our power to give, against any other in the whole list of diseases, and that the malady against which that protection is given, is one of the most loathsome in its aspect, most fatal in its effects, most permanent in its personal disfigurement, and most contagious in its nature of all diseases, in the case of those to whom

is denied the protection afforded by vaccination. Disinterested as has been the course pursued by the great body of the medical profession, in giving all the assistance they could towards the eradication of a disease, which, as I suspect to have been the case with small-pox, brought more gain into the pockets of medical practitioners, in days when all were unprotected from its attacks, than any other disease requiring medical care, I cannot but regret the opposite line of conduct which some medical men think it right to adopt.

I am, etc., Thomas Walker, M.D.

Peterborough, November 26th, 1859.

OUGHT NOT THE COLLEGE OF SURGEONS OF ENGLAND TO BE CAREFUL IN THE ADMISSION OF MEMBERS?

Sir,—Will you permit me, through the medium of the Journal, respectfully to point out what I and many others regard as a most degrading and mischievous line of proceeding pursued by the College of Surgeons of London towards the educated and enlightened members of its body?

To my utter disgust and sorrow, the painful reality of this state of things has been recently forced upon us in this neighbourhood, of having to be associated (through the medium of the College) in professional brotherhood with men hoary in the service of the humblest and meanest callings of necessitous existence, utterly devoid of everything that appertains to education of mind or dignity of character, practising the most unblushing quackery even up to the very moment when the College of Surgeons was embracing them as brothers.

When, therefore, sir, I behold a distinguished corporation, like the Royal College of Surgeons, thus giving the sanction of its high name to characters such as I have but imperfectly portrayed, by enrolling them as fellow members with some of the most distinguished names that ever adorned the temple of science, I should be doing violence to my feelings as a surgeon and a gentleman, were I to refrain raising my humble voice in deprecation of such a course of proceeding.

The College, moreover, by giving to these people its diploma, furnishes them with that spurious *locus standi*, and halo of false importance, which deceives other scientific bodies into admitting them into their ranks; as, *horresco referens*, I observe to have been done by the British Medical Association.

Now, feeling, as I do most keenly, the vital importance to the dignity and character of the Colleges generally, and the profession at large, that early and vigilant steps should be taken to stop the admission of any candidate who cannot produce satisfactory testimony of his fitness both by general education and high moral character, I will, by your permission, venture to suggest what, to my humble judgment, may stay this gangrenous mischief.

First, I would require, in addition to professional acquirements, a high standard of classical and general attainments, from every candidate, whether for medical or surgical degrees.

Secondly, I would insist upon testimonials of moral character being furnished from either two members of the medical profession, or the clergy of the place where the candidate resided.

If such were adopted, the examining bodies would then place themselves in a safe position of judging of the general fitness of the applicant. I am, etc., Aliquis.

Leigh, November 28th, 1859.

Medical News.

BIRTHS, MARRIAGES, DEATHS, AND APPOINTMENTS.

** In these lists, an asterisk is prefixed to the names of Members of the Association.*

BIRTHS.

Of sons, the wives of—

Bulleid, G., Esq., Surgeon, Connaught Terrace, on Dec. 1.
Cooper, George, Esq., Surgeon, Croydon, on Nov. 30.
Guy, William, M.D., Biddenden, on Dec. 3.
*Harrison, J. Bower, M.D., Manchester, on Dec. 4.
Roden, William, M.D., Kidderminster, on Dec. 2.

MARRIAGES.

*Brown, Frederick James, M.D., of St. Margaret's Banks, Rochester, to Harriet Landels, youngest daughter of John Shepherd, Esq., Deputy Storekeeper, Military Store Department, Upnor Castle, near Rochester, on Dec. 1st.
Carroll, John G., Esq., barrister, of Woodstock, Canada West to Mary L., second daughter of Francis Badgley, M.D., of 43 Albion Street, W., at Quebec, on November 2nd.
Engleheart, S. P., Esq., surgeon, Springfield, Reigate, to Lydia Jane, youngest daughter of Henry Thompson, Esq., of Tunbridge Wells, on December 3rd.
Jarratt, George, Esq., of Elmfield House, Yorkshire, to Alice, second daughter of George Dunn, M.D., Doncaster, on November 20th.
Kelly, J. H., M.D., Queenstown, Cork, to Susan, eldest daughter of Josiah Jones, Esq., of Wavertree, on Dec. 1st.

DEATHS.

Andrew, James, M.D., in Edinburgh, on December 1st.
Black. On December 3rd, in Southgate Road, aged 2, Eliza M., youngest child of R. J. Black, M.D.
Davis. On November 30th, in London, aged 52, the Rev. H. Hall Davis, eldest son of the late David D. Davis, M.D.
England. On November 30th, at Ipswich, aged 44, Margaret E., wife of William England, M.D.
*Fletcher, John William, Esq., late Bengal Army, aged 41, on December 2nd.
Peskett, H., M.D., at Yarmouth, Isle of Wight, on Dec. 2.
Roots, William, M.D., at Kingston-on-Thames, aged 83, on December 2nd.
Such, Edward J., Esq., Surgeon, 19, Euston Road, aged 43, on November 29th.
Trench, John P., Esq., Staff-Surgeon, aged 40, on Dec. 1.

APPOINTMENTS.

*Warden, Charles, M.D., elected Surgeon to the Birmingham Ear Infirmary, in place of W. Dufton, Esq., deceased.

PASS LISTS.

Royal College of Physicians of London. Fellows elected at the meeting of the Comitia Majora, held on Nov. 21st:—

Maclachlan, Daniel, Royal Hospital, Chelsea
Shapter, Thomas, Exeter
Smith, W. Tyler, Upper Grosvenor Street, London

University of London. M.B. Examination for Honours.

Physiology and Comparative Anatomy.

Crowfoot, W. M. (Scholarship and Gold Medal), St. Bartholomew's Hospital
Gasquet, Joseph R. (Gold Medal), University College
Thompson, Edmund Symes, King's College
Moxon, Walter, Guy's Hospital
Robbs, William Edward, King's College

Surgery.

Crowfoot, W. M. (Scholarship and Gold Medal), St. Bartholomew's Hospital
Hill, Matthew B. (Gold Medal), University Colllege
Thompson, Edmund Symes, King's College
Moxon, Walter, Guy's Hospital
Marriott, Charles Hayes, University College
Jones, Philip Sydney, University College } Equal.
Liddon, William, King's College }

Medicine.

Thompson, E. S. (Scholarship and Gold Medal), King's College
Robbs, William E. (Gold Medal), King's College
Gasquet, J. Raymond, University College } Equal.
Marriott, C. Hayes, University College }
Moxon, Walter, Guy's Hospital
Jones, Philip Sydney, University College
Hill, Matthew Berkeley, University College
Crowfoot, William Miller, St. Bartholomew's Hospital

Midwifery.

Crowfoot, Wm. M. (Gold Medal), St. Bartholomew's Hospital
Jones, Philip Sydney, University College
Thompson, Edmund Symes, King's College
Moxon, Walter, Guy's Hospital
Robbs, William Edward, King's College

M.D. Examination, 1859.

First Division.

Carpenter, Alfred, St. Thomas's Hospital
Cousins, John Ward, St. Thomas's Hospital
Down, John Langdon Haydon, London Hospital
Foster, Michael, B.A., University College
Giles, Samuel, B.A., Guy's Hospital
Hardwick, Robert G., Leeds School of Medicine
Lawrence, George William, King's College
Lewis, Thomas, University College
Meeres, Edward Evan, King's College
Newman, William, St. Bartholomew's Hospital
Wilkinson, Richard, King's College

Royal College of Surgeons. Members admitted at a meeting of the Court of Examiners, on December 2nd:—

Anderson, A., Manchester
Blackburn, J., Barnsley
Drury, J. T. C., Doncaster
Edye, Stonard, Exeter
Fox, Allan N., Dublin
Godwin, C. H. Y., Bishopstoke
Heslop, A., Kirkby Stephen
Knight, Thomas, Brill
Lane, W. B., Kinsale
Mitchell, Thos. C., Bedford
Morgan, Cosby W., Australia
Smyth, Brice, Dublin
Thompson, H., Westerham
Winkfield, A., Bedford

Monday, December 5th:—

Addison, Wm. J., Wigton
Attwell, G. H., Kensington
Bennett, Geo. J., Gateshead
Bernard, John C., Trinidad
Bowen, David, Haverfordwest
Cook, John, Kentish Town
Copp, H. B. P., Bedford
Dawson, G., Bishop Auckland
Dickins, Fred. V., Manchester
Franks, John, Sevenoaks
Freeman, William, Maldon
Greenwood, Newton, Truro
Horniblow, Wm. R., Shipston-on-Stour
Horton, H. J., Fulham
Hunt, Thos. junr., Alfred Place
Kitchener, T., Trinity Square
Mawley, Aug., Gower Street
Mayou, George, Monmouth
Sheldon, Thos., Stratford-on-Avon
Simmons, Benj., Hatfield, Yorks
Smith, William, Aberdeen
Terry, Joseph G., Wittersham
Wilson, Jacob A., Sydney
Williams, Robert, Liverpool
Woodhead, Wm. C., York

At the same meeting of the Court—

Ryan, Edward Tenison, H.M. ship *Pembroke*
Eustace, Richard, Haslar Hospital

Passed their examinations for Naval Surgeons. These gentlemen had previously been admitted members of the College: their diplomas bearing date respectively August 9th, 1852, and Oct. 28th, 1853.

Tuesday, December 6th:—

Board, Edmund C., Bristol
Booth, Samuel, Huddersfield
Broster, John, Chester
Foster, T. S., Carnarvon
Horsley, Henry, Croydon
Hutchean, H. S., Aberdeen
Irvine, George R. Portsmouth
Kearney, Daniel, Madras
Lee, Leonard J., London
Lloyd, Albert, Bristol
Michell, Thomas, Redmouth
Miller, Thomas, Boyton
Mewniece, James, Belfast
Murray, William, Durham
Moore, Thomas, Hales Owen
Neesam, Joseph, Bradford
Pell, Walton N., Northampton
Pout, Frank, Yalding
Rickard, Henry, Plymouth
Thomas, John R., Dublin
Trotter, Charles J., Holmfirth
Wallis, R. S., Birmingham
Wither, Fras. O. B. Madras

HEALTH OF LONDON—DECEMBER 3rd, 1859.

[*From the Registrar-General's Report.*]

	Births.	Deaths.
During week ..... {Boys .. 915 / Girls .. 912}	1827 ..	1304
Average of corresponding weeks 1849-58 ..	1609 ..	1356

Among the causes of death were—bronchitis, 167; small-pox, 39; scarlatina, 87; diphtheria, 13.

Barometer:
Highest (Sat.) 30·014; lowest (Wed.) 29·410; mean 29·741 in.

Thermometer:
In sun—highest (Sat.) 49·8°; lowest (Sat.) 36·0°.
In shade—highest (Sun.) 48·0°; lowest (Sat.) 29·0°.
Mean—37·3°; difference from mean of 43 yrs.—4.3°.
Range—during week, 19·0°; mean daily, 8·1°.

Mean humidity of air (*saturation*=100), 89.

Mean direction of wind, variable.—Rain in inches, 1·18.

PUBLIC VACCINATION.

The following order was issued by the Privy Council on December 1st.

To the Guardians of the Poor of all Unions and Parishes, to the Churchwardens and Overseers of all Parishes, Townships, and places in which the Relief to the Poor is not administered by Guardians, in England and Wales, and to all Medical Practitioners.

Whereas by the Public Health Act, 1858, and by an Act since passed to perpetuate the same, it is enacted that the Privy Council may from time to time issue such regulations as they think fit, for securing the due qualification of persons to be thereafter contracted with by guardians and overseers of unions and parishes in England for the vaccination of persons resident in such unions and parishes, and for securing the efficient performance of vaccination by the persons already or thereafter to be contracted with as aforesaid;—

Now, therefore, it is hereby ordered, by the Lords and others of Her Majesty's Most Honourable Privy Council (of whom the Vice-President of the Committee of the said Privy Council on Education is one) that on and after the first day of January, 1860, the following Regulations shall be in force; viz.:—

1. Except where the Privy Council, for reasons brought to their notice, see fit in particular cases otherwise to allow, no person shall in future be admitted as a contractor for vaccination, unless he possess the same qualifications as are required by the orders of the Poor-law Commissioners as qualifications for a district medical officer, and produce a special certificate, given, under such conditions as the Privy Council from time to time fix, by some public vaccinator whom the Privy Council authorise to act for the purpose, and by whom he has been duly instructed or examined in the practice of vaccination, and all that relates thereto:—but the production of this special certificate on occasion of the contract being made may be dispensed with, if the certificate, or some other which the Privy Council judge to be of like effect, have been among the certificates or testimonials necessary for obtaining any diploma, licence or degree, which the candidate possesses;—and also, in respect of persons legally admitted to practise before this regulation comes into effect, the special certificate may be dispensed with, on condition that the contract, during one year from its making, continue subject to the approval of the Poor-law Board;—and all persons now contracted with shall be deemed to be qualified to be again contracted with.

2. Under the same conditions as are appointed for the admission of a contractor, any person qualified to be a contractor may, on the contractor's application, be admitted by the guardians or overseers to act as his occasional deputy;—but, if this admission be not part of the original contract, it must be notified by indorsement upon the contract; and at least fifteen days before it is intended to take effect, a copy of the proposed indorsement, together with all requisite evidence of the qualification of the person whom it is proposed to admit, must be transmitted to the Poor Law Board.

3. All vaccinations and inspections under contract shall be performed by the contractor in person, or by some other contractor of the same union or parish acting for him, or by a deputy, duly admitted as above;—but at any station where the contractor is authorised (as above) to grant certificates, pupils and other candidates, aged not less than eighteen years, may, in his presence and under his direction, take part in vaccinating. All vaccinations and inspections under contract shall be performed in accordance with the annexed "Instructions for Vaccinators under contract."

4. Until some new form of vaccination-register be duly prescribed, the person who performs any vaccination under contract shall, on the day when he performs it, legibly write in his register (as now provided) the letter R (for revaccination) against the name of every person, adult or adolescent, who, having in early life been successfully vaccinated, is revaccinated: and shall also enter in some column, or in the margin of the register, the source whence the lymph used in the vaccination was obtained;—thus: the name, or number, (if any) in the register, of the subject from whom the lymph was taken; or "N.V.E.", if the lymph was sent by the National Vaccine Establishment; or the name or description of any other source;—and where the vaccination or the inspection is done by a person acting as deputy for the contractor the deputy shall write the initials of his name in the register side by side with the entry of the case, viz., in the left margin of the

page, if it be the vaccination which he performs, or in the right margin of the page, if it be an inspection which he performs.

5. Guardians and oversecrs, in their respective unions and parishes, shall forthwith take measures to bring the performance of public vaccination into conformity with these regulations.

BRISTOL AND BATH MEDICAL REGISTRATION ASSOCIATION.

A General Meeting of the members of this Association was held on Thursday, Dec. 1st, in the Lecture Hall of the Bristol Institution, Park Street; Dr. Symonds, of Bristol, President of the Association, was in the Chair; and, in opening the business of the meeting, said that the objects of the Association, as he apprehended then, were to protect both the public and the profession: or rather, perhaps, it might be said, to maintain a due relation between the public, the profession, and the law: to see that the law protects, as it is intended to do, both the public and the profession. It would seem that, unless there be a cooperation with the legislature by such bodies at these, there is a strong probability that the law, like so many others still on our statute-books, will become inefficient, and at last obsolete. He would trust that by the efforts of bodies like this, the public will in time become informed about the sort of persons to whom they confide their health. If, after this system of legislature has been carried out, the public still selects persons for the charge of their health who have on their foreheads the brand of incompetency and ignorant pretensions, such as will be signified by the term "unregistered," the responsibility will rest with them, and they must stand the consequences. He had no doubt that many useful suggestions would be thrown out by the members of the Association; and he trusted they would agree in carrying out its objects in a liberal spirit; that while they maintained an aspect of stern justice towards the profession, they should not incur the reproach of carrying out the law in anything like a persecuting spirit. They had a right to appear before the public and say—"The legislature has made certain requirements of us: we have endeavoured to comply with them, at the cost of much toil, much anxiety, and much pecuniary outlay; and we therefore expect that in reciprocation of our duty, you will draw a distinction between those who have complied with the wishes of the legislature and those who have not."

Mr. R. S. Fowler then read the minutes of the last meeting. The names of about fifty gentlemen who had signified their wish to become Members of the Association were submitted to the meeting, and the whole were unanimously elected by ballot.

Drs. Tunstall, Henderson, and Parsons, and Mr. J. J. Evans, were appointed scrutineers of the voting lists of officers of the Association.

The following were adopted as the rules of the Association:—

1. This Society shall be called the "Bristol and Bath Medical Registration Association."

2. The objects of this Association shall be to watch the workings of the Medical Act, to suppress illegal practice, and to assist the Registrar under the Medical Act to secure a correct Registration, and such other matters as may be deemed advisable by the Council.

3. All practitioners who are to be registered under the Medical Act, shall be eligible to become Members of this Association. Admission shall be by ballot in any meeting of the general Council, and the affirmation of two-thirds of the members voting shall be necessary to secure the election: but any candidate rejected by the Council may have the right of appeal to the next General Meeting of the Association.

4. Each member shall pay five shillings annually, in advance, on the first day of January.

5. The same division of districts shall hold in the Registration Association as now exists in the Bath and Bristol branch of the British Medical Association.

6. The affairs of the Association shall be conducted by a President, two Vice-Presidents, two Treasurers, two Secretaries, and a Committee or Council of twenty members. The President shall be elected annually, alternately from the Bath and Bristol districts. The Vice-Presidents and officers shall be elected annually, by ballot, one from each district. The President, Vice-Presidents, Treasurers and Secretaries shall be *ex officio* members of Council: five to form a quorum. The members of Council to be chosen by ballot, ten from each district, five of whom are to retire annually, eligible to re-election. The first retiring five in each district to be chosen by lot.

7. There shall be an annual meeting of the Association, and at least one quarterly meeting of the Council; the latter of which shall correspond, both as to day and place, with the meeting of the Bath and Bristol branch of the British Medical Association.

8. A special general meeting of the Association may be convened by a written requisition, signed by ten members, and presented to the President, or to one of the Secretaries, who shall summon such meeting within fourteen days from the receipt of the requisition.

9. The officers and council elected by each district separately, shall be called the local Council, and shall meet for the transaction of the business of that district as often as may be necessary in the intervals of the quarterly meetings of the general Council, forty-eight hours notice being given to each member. Three members to form a quorum.

10. Any four members of the Council shall have the power of convening a special meeting of that body, by presenting a written requisition of their wish to the President, or one of the Secretaries, who shall summon such meeting; to be held eight days after the receipt of such notice.

11. No prosecution involving expense to this Association shall be undertaken without the sanction of the general council.

12. The rules and bye-laws of this Association shall be entered in a book to be kept for that purpose; and the signatures of members, in that book, shall be deemed to imply consent thereto.

13. At special or adjourned meetings, no subjects shall be discussed but those for which such meetings shall have been convened.

14. All prosecutions shall be undertaken in the name of the Secretary of the district.

15. No new rule and that no alteration of rule be made except at an annual meeting of the Association; notice of such alteration of rule having been given in the summons convening the meeting at least one fortnight before such meeting.

The Secretaries then reported that the following members had been elected officers of the Society:—

Bristol District. *Vice-President:* H. Clark, Esq. *Treasurer:* J. J. Evans, Esq. *Secretary:* J. P. McDonald, L.R.C.P.E. *Council:* F. Brittan, M.D.; W. Budd, M.D.; Jas. Godfrey, Esq.; T. Green, Esq.; W. B. Herapath, M.D.; H. A. Hore, Esq.; C. Leonard, Esq.; W. F. Morgan, Esq.; A. Prichard, Esq.: J. G. Swayne, M.D.

Bath District. *Vice-President:* G. Norman, Esq. *Treasurer:* J. S. Bartrum, Esq. *Secretary:* R. S. Fowler, Esq. *Council:* E. L. Bagshawe, Esq.; W. J. Church, Esq.; W. Davies, M.D.; Farnham Flower, Esq. (Chilcompton); E. Hodges, M.D.; F. Mason, L.R.C.P.E.; J. Soden, Esq.; R. N. Stone, L.R.C.P.E.; J. Tunstall, M.D.; G. Vicary, Esq. (Warminster).

Dr. J. P. McDonald read the report of the Bristol Registration Association, which, on the motion of Dr. Tunstall, was ordered to be entered on the minutes of the meeting.

The proceedings terminated with a vote of thanks to the Sub-Committee and Secretaries of the Bath and Bristol branch of the British Medical Association, for the labour which the construction of the Association had entailed upon them; to Dr. Symonds for his kindness in presiding; and to the Committee of the Institution, for the use of the Lecture Hall, for the uses of the meeting.

PORTSMOUTH, PORTSEA, AND GOSPORT MEDICAL REGISTRATION ASSOCIATION.

At a large meeting of the medical profession of Portsmouth and its neighbourhood, held November 17th, it was determined to form a society called "The Portsmouth, Portsea, and Gosport Medical Registration Association." The following officers were elected for the ensuing year:—*President*—The Worshipful the Mayor of Portsmouth, W. H. Garrington, Esq. *Vice-Presidents*—Richard White, Esq., and Samuel Irvine, M.D. *Hon. Treasurer*—George I. Scale, Esq. *Hon. Secretary*—James Greetham, Esq.

The meeting then adjourned until December 1st, when rules and bye-laws were adopted similar to those of the London Association, with which this society intends affiliating itself. Above fifty members have already joined the society.

Improvement in the Voltaic Pile. It is well known that Bunsen's pile, which is but a modification of Grove's, consists of a glazed vessel, containing a cylindrical element of zinc, which surrounds a porous vessel filled with strong nitric acid, into which a charcoal cylinder has been introduced, the liquid in the outermost vessel consisting of water acidulated with about ten parts of sulphuric acid. Now, although this is a most powerful combination, and in general use, it has two great inconveniences: first, the quantity of nitrous vapour it evolves is highly unpleasant, and may become dangerous; and, secondly, the current produced is not of constant intensity. M. Thomas has just communicated to the Academy of Sciences a modification which he has effected in this kind of pile, and which would seem to be quite free from the inconvenience alluded to. M. Thomas, in fact, shows that the development of nitrous vapour is one of the chief causes which interfere with the constancy of the current, inasmuch as they attack the copper ribands forming the electrodes, and effect certain chemical combinations, which give rise to counter-currents, and thus impair the principal one. He therefore causes these gases, as they are evolved, to pass into a porous vessel, where they are decomposed. In this process, a secondary current is produced, which, by the peculiar construction of the apparatus, is turned to account, and tends to correct the inequalities of the principal current. This arrangement also prevents the pile from becoming dirty, as is the case with Bunsen's pile.

Action for Breach of Contract. In the Vice-Chancellor's Court, on Dec. 2nd, an action was tried before Vice-Chancellor Sir J. Stuart, in which the plaintiff, Mr. Giles, surgeon, of Great Coggeshall, in Essex, sought an injunction to restrain Mr. Hart, the defendant, from practising as a surgeon and apothecary, or surgeon, or from acting as a physician, in the said town, or within five miles thereof, during the plaintiff's life. In April 1854, the plaintiff, then and now a general practitioner at Great Coggeshall, engaged the defendant as his assistant, at a salary of £80 per annum; and, by an indenture which was then entered into, the defendant covenanted that he would during such time as the plaintiff should carry on his business, or until the indenture should be determined by notice, act as the plaintiff's assistant; and that he (the defendant) would not, "whether such indenture should be in other respects determined or not", act as the assistant of any other medical practitioner, or either by himself or in partnership practise medicine or surgery in Great Coggeshall, or within five miles. The deed contained a power for the plaintiff or defendant to determine the indenture by giving one calendar month's notice in writing. The defendant had acted as the plaintiff's assistant up to the 11th of November, when he left, a month's notice having been given; since which time he had, as alleged by the plaintiff, set up on his own account in Great Coggeshall. The Vice-Chancellor granted an injunction until further order.

The Prosecution of the Bennett Gang. At the Lambeth Police Court on Saturday, Mr. Samuel Smith, surgeon, of Langham Place West, waited on the Honourable Mr. Norton regarding the case of Mr. Jones, who had been the prosecutor against the notorious quack impostors, Watters, Edwards, and Allen, a portion of the Bennett gang, and who had been put to an expense of upwards of £60, an amount which placed him in the most straitened circumstances. Mr. Smith handed a list of subscriptions, amounting altogether to £22 5s., which was headed with a subscription of £5 5s., from the London Medical Registration Association, and the second item was one of £5 5s. from Mr. Smith himself. Mr. Norton, on looking over the list, expressed much regret that the sum received by the poor man was so small, not more than a third of the amount which he was actually out of pocket. The Medical Registration Association, he understood, had at its disposal a very large sum of money; and, as Mr. Smith had already taken so kind an interest in the poor man's case, he (Mr. Norton) thought it would be desirable that he should wait on the Medical Association, and say it was his (Mr. Norton's) opinion that the case was one in which they should extend their liberality, and not leave Jones a loser.

Edinburgh University. The number of students at the university is considerably larger than it was last year. On the 23rd November, 1356 students had been enrolled; last year the total number who matriculated was 1296. The increase is chiefly in the literary faculty; but the number of medical students (486) shows an increase of 10.

TO CORRESPONDENTS.

POSTAGE OF MANUSCRIPT AND PRINTED MATTER.

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Anonymous Correspondents should always enclose their names to the Editor; not for publication, but in token of good faith. No attention can be paid to communications not thus authenticated.

Members should remember that corrections for the current week's Journal should not arrive later than Wednesday.

An Associate. Yes.

Communications have been received from:—Aliquis; Mr. Robt. Jones; Mr. Rd. Faircloth; Dr. F. J. Brown; An Associate; Dr. Sedgwick; Dr. Walker; Mr. C. B. Garratt; Dr. W. O. Markham; Dr. Seaton; Mr. R. S. Fowler; Mr. F. J. Sandford; The Secretary of the Harveian Society; Dr. William Camps; Mr. H. Granger Earnshaw; Mr. Frederick Fry; Dr. John Armstrong; Dr. Jas. Russell; Mr. Crosby Leonard; Mr. Haynes Walton; The Secretary of the Portsmouth, Portsea, and Gosport Medical Registration Association; Mr. T. Holmes; Mr. Oliver Pemberton; Dr. C. H. Jones; and Mr. W. M. Clarke.

BOOKS RECEIVED.

[* *An Asterisk is prefixed to the names of Members of the Association.*]

1. Descriptive Catalogue of the Preparations in the Museum of St. Thomas's Hospital. Printed by Order of the Governors. Volumes II and III. Pathological Anatomy. Compiled and Edited by Sydney Jones, F.R.C.S., M.B. London: H. Renshaw. 1859.

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Healc's Vital Causes.	Garrod on Gout.
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